

XXXI.—*A List of the Birds of the Anglo-Egyptian Sudan, based on the Collections of Mr. A. L. Butler, Mr. A. Chapman and Capt. H. Lynes, R.N., and Major Cuthbert Christy, R.A.M.C. (T.F.). Part IV. (concluded).*
PELECANIDÆ—STRUTHIONIDÆ. By W. L. SCLATER, M.B.O.U., and C. MACKWORTH-PRAED, M.B.O.U.*

(Plate XVIII.)

THIS, the fourth portion of the list of the Birds of the Sudan, is the final one of a rather lengthy paper. The previous parts appeared in 'The Ibis' of July 1918, October 1918, and October 1919. Since the other parts were printed, more material has come to hand from the Sudan, and nomenclature has in some cases been changed, with the result that a list of Addenda and Corrigenda is necessary to bring these parts up to date. We are indebted to Major Claude Graham for some most interesting birds from the Nuba Mountains in Kordofan, notably a pair of the White-capped Chat, *Thamnolea albiscapulata*, or its local representative.

We have also examined a collection of birds from the Khartoum Museum sent home by Mr. H. H. King, the Sudan Government Entomologist, including one or two species new to the Sudan, and to him (as well as, of course, to the authorities of the Natural History Museum) we are particularly grateful.

For the convenience of readers, we reprint the map of the Sudan (Pl. XVIII.) and also the abbreviations used for the names of the Provinces, which are as follows :—

Ber. = Berber Province, **R.S.** = Red Sea Province, **Kas.** = Kassala, **Sen.** = Sennar, **B.N.** = Blue Nile Province, **Kh.** = Khartoum Province, **Kor.** = Kordofan Province, **W.N.** = White Nile Province, **U.N.** = Upper Nile Province, **B.G.** = Bahr-el-Ghazal, **Mon.** = Mongalla Province, and **L.E.** = Lado Enclave.

* [Owing to Mr. Sclater's absence abroad, the junior author is entirely responsible for this Part of the paper.—C. W. M. PRAED.]

The word "Sudan," as used in this part of the paper, means the Anglo-Egyptian Sudan only.

The following new races are described in this instalment :—

Stigmatopelia senegalensis sudanensis.

Turtur afra mearnsi.

Ptilopachus petrosus butleri.

Ptilopachus petrosus ladoensis.

We had hoped to be able to give, at the conclusion of this paper, some remarks on the general relationship and distribution of the Sudanese avifauna, as well as on the migrants both Palæarctic and "Inter-tropical" which occur in the country, but at the moment space and time alike forbid.

Family PELECANIDÆ.

Pelecanus onocrotalus subsp.

Pelecanus onocrotalus Linn. Syst. Nat. 10th ed. 1758, p. 132: Africa; Reichw. V. A. i. p. 99; Butler, Ibis, 1905, p. 381.

[C. & L. coll.] 3 Kodok Mch. U.N.

There can be little doubt of the occurrence of typical *P. onocrotalus* in the Sudan, but the three specimens collected seem decidedly intermediate between that form and the small eastern form *P. o. roseus* Gmel. They are all females with bills (culmen from tip of feathers) of 310, 325, and 342 mm. *P. o. roseus* is also recorded by Heuglin.

Pelecanus rufescens.

Pelecanus rufescens Gmel. Syst. Nat. i. pt. 2, 1789, p. 571: West Africa; Reichw. V. A. i. p. 102; Butler, Ibis, 1905, p. 381, 1908, p. 256.

Common in the Sudan, though we have no actual specimens.

Family SULIDÆ.

Sula leucogaster subsp. ?

Pelecanus leucogaster Bodd. Pl. Enl. 1783, p. 57, No. 973 (ex Buffon): Cayenne.

[B. coll.] 1 Port Sudan May, R.S.

[C. & L. coll.] 2 Port Sudan Apl. R.S.

We have not sufficient material to enter into the races of this bird. The Brown Booby ranges throughout the tropical and subtropical seas, the form occurring on the Australian coasts being referred to *S. l. plotus* (Forster) by Mathews.

Sula* (*Parasula*) *dactylatra melanops.

Sula melanops Heuglin, Ibis, 1859, p. 351 : Somali coast.

No actual records are known to us from the Sudan, but in all probability the bird occurs on the coast of the Red Sea as well.

Family ANHINGIDÆ.

Anhinga rufa.

Plotus rufus Lacépède & Daud. in Buff. Hist. Nat. (18mo, ed. Didot), Quad. xiv. p. 319; Ois. xvii. 1799, p. 81 : Senegal; Butler, Ibis, 1905, p. 381.

Anhinga rufa Reichw. V. A. i. p. 95.

[B. coll.] 1 Jebelein Apl. U.N.; 1 Bor May, Mon.

[C. & L. coll.] 1 Melut, 1 Meshra Zeraf Jan. U.N.

Found on most of the rivers throughout the country.

Family PHALACROCORACIDÆ.

***Phalacrocorax carbo* subsp. ?**

Phalacrocorax carbo Reichw. V. A. i. p. 90.

[B. coll.] 1 Khartoum Nov.

This specimen is an immature female of what is apparently the common European Cormorant *P. c. subcormoranus* (Brehm), but we should not like to be certain as to subspecies. The only previous record we know of from the Sudan is one by Brehm from Sennar.

Microcarbo africanus.

Pelecanus africanus Gmelin, Syst. Nat. i. pt. 2, 1789, p. 577 : White Nile (cf. Claude Grant, Ibis, 1915, p. 75).

Phalacrocorax africanus Reichw. V. A. i. p. 93; Butler, Ibis, 1905, p. 381.

[B. coll.] 1 Renk, 1 Malakal May, U.N.

[C. & L. coll.] 1 Meshra Zeraf Jan. U.N.

[Chr. coll.] 1 Yei Dec. L.E.

Common and widely distributed.

Family ANATIDÆ.

Sarkidiornis melanotus africanus.

Sarkidiornis africanus Eyton, Mon. Anat. 1838, p. 103 :
Gambia River.

Sarkidiornis melanotus Reichw. V. A. i. p. 129.

Sarcidiornis melanonota (Penn.) Butler, Ibis, 1905, p. 383,
1908, p. 257.

[B. coll.] 1 Malakal May, U.N.

Abundant on the upper Nile.

Nettapus auritus.

Anas aurita Bodd. Tabl. Pl. Eul. 1783, p. 48 : Madagascar.

Nettapus auritus Reichw. V. A. i. p. 127 ; Butler, Ibis,
1905, p. 383.

[B. coll.] 1 Meshra el Rek Mch. B.G.

[Chr. coll.] 2 Meridi Feb. B.G.

Not uncommon in the southern Sudan, and occurs in
Kordofan in the rains.

Casarca ferruginea.

Anas ferruginea Vroeg, Cat. Adumbr. 1764, p. 5 :
Tartary.

Casarca casarca (Linn.) ; Reichw. V. A. i. p. 136.

Tadorna casarca Butler, Ibis, 1905, p. 384.

[B. coll.] 1 Khartoum Apl.

The Ruddy Sheld-Duck is abundant on the lower White
Nile in winter (*A. L. B.*).

Anas platyrhynchos.

Anas platyrhynchos Linn. Syst. Nat. 10th ed. 1758,
p. 125 : Europe, restricted type-locality Sweden.

Anas boschas Linn. auctorum.

The Mallard is not at all common in the Sudan, but is
recorded by Mr. Butler from the White and Blue Niles.

Anas strepera.

Anas strepera Linn. Syst. Nat. 10th ed. 1758, p. 125 : Europe, restricted type-locality Sweden ; Reichw. V. A. i. p. 116.

The Gadwall is recorded from Suakin by Heuglin, but Mr. Butler never met with it in the Sudan.

Nettion crecca crecca.

Anas crecca Linn. Syst. Nat. 10th ed. 1758, p. 126 : Europe, restricted type-locality Sweden ; Reichw. V. A. i. p. 122.

Querquedula crecca Butler, Ibis, 1905, p. 384.

[B. coll.] 1 Khartoum Oct., 1 near Kawa Feb. **U.N.**

[C. & L. coll.] 1 White Nile lat. 14° N. Jan. **W.N.**

The Teal is common, but not so abundant as the Garganey.

Querquedula querquedula.

Anas querquedula Linn. Syst. Nat. 10th ed. 1758, p. 126 : Europe, restricted type-locality Sweden ; Reichw. V. A. i. p. 121.

Querquedula circia (Linn.) ; Butler, Ibis, 1905, p. 384, 1908, p. 257.

[B. coll.] 1 Khartoum Mch. 10 ; 1 Kawa Sept. 30, **U.N.**

[C. & L. coll.] 1 Senga Dec. **Sen.** ; 1 White Nile lat. 13° N. Jan. **W.N.**

The Garganey is widely distributed in winter, south to Uganda (*A. L. B.*).

Dafila acuta.

Anas acuta Linn. Syst. Nat. 10th ed. 1758, p. 126 : Europe, restricted type-locality Sweden ; Reichw. V. A. i. p. 117.

Dafila acuta Butler, Ibis, 1905, p. 384.

[B. coll.] 1 Khartoum Mch. 25, 1 Omdurman Dec. **Kh.**

According to Mr. Butler the Pintail is the most abundant of the winter-visiting Ducks from the north.

Pœcilonetta erythrorhyncha.

Anas erythrorhyncha Gmel. Syst. Nat. i. pt. 2, 1789, p. 517 : Cape of Good Hope ; Reichw. V. A. i. p. 118.

The Red-bill is stated by Rüppell to have been obtained in Seunar. We know of no later record.

Spatula clypeata.

Anas clypeata Linn. Syst. Nat. 10th ed. 1758, p. 124 : Europe, restricted type-locality Sweden.

Spatula clypeata Reichw. V. A. i. p. 110 ; Butler, Ibis, 1905, p. 384.

[B. coll.] 4 Khartoum Feb. Mch. Oct.

The Shoveler is another widely distributed species in winter.

Mareca penelope.

Anas penelope Linn. Syst. Nat. 10th ed. 1758, p. 126 : Europe, restricted type-locality Sweden ; Reichw. V. A. i. p. 117.

Mareca penelope Butler, Ibis, 1905, p. 384.

Mr. Butler mentions that he has several times shot Wigeon at Khartoum, but that it is one of the scarcer winter visitors.

Fuligula fuligula.

Anas fuligula Linn. Syst. Nat. 10th ed. 1758, p. 128 : Europe, restricted type-locality Sweden.

Nyroca fuligula Reichw. V. A. i. p. 107.

Fuligula cristata (Leach) ; Butler, Ibis, 1905, p. 385, 1908, p. 257.

[B. coll.] 4 Khartoum Mch. and "winter."

Nyroca nyroca.

Anas nyroca Gùldenst. Nov. Comm. Petrop. xiv. 1770, pt. i. p. 403 : S. Russia.

Nyroca nyroca Reichw. V. A. i. p. 109.

Fuligula nyroca Butler, Ibis, 1908, p. 257.

[B. coll.] 1 Khartoum Mch. 15.

Nyroca ferina.

Anas ferina Linn. Syst. Nat. 10th ed. 1758, p. 126 : Europe, restricted type-locality Sweden.

[B. coll.] 2 Khartoum Mch. 6 & 10.

The Pochard is apparently not common in the Sudan. One of these specimens is recorded by Mr. Butler (*Ibis*, 1908, p. 257) as *Fuligula nyroca*, by an error.

Dendrocygna viduata.

Anas viduata Linn. Syst. Nat. 12th ed. 1766, p. 205 : Cartagena, Columbia.

Dendrocygna viduata Reichw. V. A. i. p. 124; Butler, *Ibis*, 1905, p. 383, 1908, p. 257.

[B. coll.] 2 Malakal May & June, U.N.; 4 Mongalla July-Sept. Mon.

[C. & L. coll.] 1 White Nile lat. 14° N. Jan. W.N.

The Whitehead Duck is plentiful in the Sudan; Mr. Butler mentions that he once heard of a flock as far north as Halfa. There appears to be no difference between African and South American examples of this species.

Dendrocygna fulva.

Anas fulva Gmel. Syst. Nat. i. pt. 2, 1789, p. 530 : "New Spain," *i. e.* Mexico (ex Brisson).

Dendrocygna fulva Reichw. V. A. i. p. 126; Butler, *Ibis*, 1905, p. 383.

[B. coll.] 1 Khartoum June.

The Whistling Duck has the same range in the Sudan as *D. viduata*, but numerically is much scarcer (*A. L. B.*).

Plectropterus gambensis rüppelli.

Plectropterus rüppelli Selater, P. Z. S. 1859, p. 131, pl. 153 : "Eastern Africa"; Butler, *Ibis*, 1905, p. 382, 1908, p. 256.

The Spur-winged Goose is widely distributed. We have no knowledge of the form known as *P. niger* (Selater, P. Z. S. 1877, p. 47) ever having occurred in the Sudan, but

Dr. Sassi (Ann. Nat. Hist. Hofmus. Wien, xxi. 1906, p. 52) records an example from Duem with mixed black and white feathers on the underside.

Alopochen ægyptiacus.

Anas ægyptiaca Linn. Syst. Nat. 12th ed. i. 1766, p. 197 : Egypt.

Chenalopex ægyptiacus Reichw. V. A. i. p. 131 ; Butler, Ibis, 1905, p. 383, 1908, p. 257.

[C. & L. coll.] 1 White Nile Jan.

The Egyptian Goose is particularly abundant on the White Nile.

Family PHÆNICOPTERIDÆ.

Phœnicopterus antiquorum.

Phœnicopterus antiquorum Temm. Man. d'Orn. 2nd ed. ii. 1820, p. 587 : Europe.

Phœnicopterus roseus Pall. ; Reichw. V. A. i. p. 349.

The Flamingo is recorded by Heuglin from the White Nile and Suakin.

Phœniconaias minor.

Phœnicopterus minor Geoffr. Bull. Sc. Soc. Philom. 1798, p. 98 : Senegal ; Reichw. V. A. i. p. 352.

Recorded by Rüppell from the southern coast of the Red Sea and by Mr. Butler from the White Nile.

Family ARDEIDÆ.

Ardea cinerea cinerea.

Ardea cinerea Linn. Syst. Nat. 10th ed. 1758, p. 143 : Europe, restricted type-locality Sweden ; Reichw. V. A. i. p. 379 ; Butler, Ibis, 1905, p. 372, 1908, p. 255.

[B. coll.] 1 Khartoum Oct. 25.

Ardea melanocephala.

Ardea melanocephala Vig. & Childr. in Denh. & Clapp. Trav. ii. App. 1826, p. 201, probably near Lake Chad ; Reichw. V. A. i. p. 380 ; Butler, Ibis, 1905, p. 372, 1908, p. 255.

[B. coll.] 1 Wad Medani Nov. **Sen.**; 1 Upper Nile Feb.,
2 Malakal May, **U.N.**

[C. & L. coll.] 1 Melut, 1 Jebelein Jan. **U.N.**

[Chr. coll.] 1 Tembura Mch. **B.G.**; 1 Yei Nov. **L.E.**

Ardea (Typhon) goliath.

Ardea goliath Cretzschmar, Atlas, 1826, p. 39, pl. 26 :
"Bahhar Abiad" = Bahr el Abiad; Reichw. V. A. i. p. 376 ;
Butler, Ibis, 1905, p. 372, 1908, p. 255.

[B. coll.] 1 Malakal May, **U.N.**

[C. & L. coll.] 1 Meshra Zeraf Jan., 1 nr. Tonga Feb.,
1 Lake No Feb. **U.N.**

Ardea (Phoyx) purpurea purpurea.

Ardea purpurea Linn. Syst. Nat. 12th ed. i. 1766, p. 236 :
France; Reichw. V. A. i. p. 377; Butler, Ibis, 1905, p. 372,
1908, p. 255.

[B. coll.] 1 Khartoum Oct., 1 nr. Shambé May, **Mon.**

[C. & L. coll.] 1 Jebel Ahmed Agha Jan. **U.N.**

All these four species of Herons are common near water
in the Sudan, the Common and the Purple being the most
abundant.

Egretta (Casmerodius) alba alba.

Ardea alba Linn. Syst. Nat. 10th ed. 1758, p. 144 :
Europe, restricted type-locality Sweden.

Herodias alba Reichw. V. A. i. p. 388; Butler, Ibis, 1905,
p. 372.

[B. coll.] 1 Malakal May, **U.N.**

[C. & L. coll.] 1 Melut Jan. **U.N.**

Egretta garzetta garzetta.

Ardea garzetta Linn. Syst. Nat. 12th ed. i. 1766, p. 237 :
"in Oriente."

Herodias garzetta Reichw. V. A. i. p. 387.

[B. coll.] 1 Malakal May, **U.N.**

[C. & L. coll.] 1 Kosti Jan. **W.N.**

Mesophoyx intermedius brachyrhynchus.

Herodias [*Egretta*] *brachyrhynchos* Brehm, J. f. O. 1858, p. 471: Blue Nile.

Herodias brachyrhyncha Reichw. V. A. i. p. 389; Butler, Ibis, 1905, p. 372, 1908, p. 255.

Recorded by Heuglin from Kordofan and the White and Blue Niles. There are specimens in the Museum from the Sobat River.

Demigretta schistacea.

Ardea (*Lepterodias*) *schistacea* Hempr. & Ehr. Symb. Phys., Zool. ii. 1828, fol. i. pl. 6: Northern Red Sea.

Herodias schistacea Reichw. V. A. i. p. 387.

[C. & L. coll.] 2 Port Sudan Dec. & Apl. R.S.

One of these birds is in grey plumage changing to white, the other in almost complete white dress. This bird has a long tarsus, and is apparently quite distinct from *D. gularis* from the rest of Africa, which also does not appear ever to have a white phase. Nor do these birds seem to us to be the same as the Indian form (*Ardea asha* Sykes, P. Z. S. 1832, p. 157: Deccan), in which the grey phase is considerably paler. We do not think, however, that there are sufficient grounds to justify its separation from the genus *Demigretta*. We cannot say from present material whether this species has two dimorphic forms—a grey and a white—or whether one is the young of the other. Hemprich and Ehrenberg concluded that the white form was the young one, and this may prove to be the case; but what we have little doubt of is that, unlike the Australian Reef-Herons (*cf.* Mathews, Birds of Australia, iii. p. 454), these are both forms of the same species. We can trace no record of the true *D. gularis* (*Ardea gularis* Bosc, Actes de la Soc. d'Hist. Nat. Paris, i. 1792, p. 4, pl. 2: Senegal River) ever having occurred in the Sudan, the specimen labelled "Nile" (Sir F. Galton) mentioned in the British Museum Catalogue being an undoubted example of *D. schistacea*, and the older authors not having separated the two birds. This species appears to be an almost exclusively marine form, while *D. gularis* is also an inland form.

Melanophoyx ardesiaca.

Ardea ardesiaca Wagl. Syst. Av., Ardea, 1827, p. 189 :
Senegambia.

Melanophoyx ardesiaca Reichw. V. A. i. p. 373.

Recorded by Heuglin from the White Nile and Sobat
River, and from Lado by Emin.

Ardeola ralloides.

Ardea ralloides Scopoli, Annus i. Hist. Nat. 1769, p. 88 :
Carniola.

Ardeola ralloides Reichw. V. A. i. p. 374.

Herodias ralloides Butler, Ibis, 1905, p. 372, 1908, p. 255,
1909, p. 89.

[C. & L. coll.] 1 Jebel Ahmed Agha, Jan. **U.N.**

Ardeola ibis.

Ardea ibis Linn. Syst. Nat. 10th ed. 1758, p. 144: Egypt.

Bubulcus ibis Reichw. V. A. i. p. 381.

Herodias bubulcus (Aud.) ; Butler, Ibis, 1905, p. 372, 1908,
p. 255.

[B. coll.] 2 Khartoum July; 1 Malakal May, 1 mouth
of Zeraf river May, 3 Upper Nile "summer" Oct.
Nov. **U.N.**; 1 Wau Apl. **B.G.**

Extremely widely distributed.

Butorides atricapilla atricapilla.

Ardea atricapilla Afzelius, Kongl. Vet.-Akad. nya Handl.
Stockh. xxv. 1804, p. 264: Sierra Leone.

Butorides atricapillus Reichw. V. A. i. p. 370; Butler,
Ibis, 1905, p. 373, 1908, p. 255.

[B. coll.] 1 Sherif Yakub Oct. **B.N.**; 1 Kenisa May,
Mon.

Generally distributed.

Butorides brevipes.

Ardea (Nycticorax) brevipes Hempr. & Ehr. Symb. Phys.
Aves, i. 1823, fol. m, Note 2: "Habitat ad ripas Nili et ad
Maris rubri littus."

Butorides brevipes Reichw. V. A. i. p. 372.

[B. coll.] 1 Port Sudan Apl. **R.S.**

This species takes the place of *B. a. atricapilla* on the shores

of the Red Sea and on the Arabian coasts. It closely resembles that species, but is of a generally dingier coloration, the green on the back being almost obsolete, as also are the throat-markings. It may prove to be but a race of *B. atricapilla*, though the legs and feet seem to be in most cases shorter and stronger than in that bird.

***Ixobrychus minutus minutus*.**

Ardea minuta Linn. Syst. Nat. 12th ed. i. 1766, p. 240 : Switzerland.

Ardetta minuta Reichw. V. A. i. p. 366 ; Butler, Ibis, 1905, p. 373.

[B. coll.] 1 Gedaref Apl. 29, Kas. ; 4 Khartoum Apl. 18–May 24 ; 2 Dueim May, W.N.

Widely distributed in winter, most noticeable at migration time.

***Ixobrychus minutus payesi*.**

Ardea payesii Hartl. J. f. O. 1858, p. 42 (ex Verreaux) : Casamanse, Senegal.

Ardetta payesi Reichw. V. A. i. p. 367.

[B. coll.] 1 Bahr el Jebel June, U.N.

The African representative of the Little Bittern, distinguished by its richer coloration, especially on the neck.

***Ardeiralla sturmi*.**

Ardea sturmi Wagler, Syst. Av., Ardea, 1827, p. 191 : Senegambia.

Ardetta sturmi Reichw. V. A. i. p. 368.

The African Dwarf Bittern has been recorded from eastern Kordofan and the Shilluk country by Heuglin. It ranges throughout Africa south and west of the Sudan.

***Nycticorax nycticorax nycticorax*.**

Ardea nycticorax Linn. Syst. Nat. 10th ed. 1758, p. 142 : Southern Europe.

Nycticorax nycticorax Reichw. V. A. i. p. 362.

Nycticorax griseus (Linn.) ; Butler, Ibis, 1905, p. 373.

[B. coll.] 1 Bahr el Jebel May, U.N.

Common.

Nycticorax leuconotus.

Ardea leuconotus Wagler, Syst. Av., Ardea, 1827, p. 189 : Senegambia.

Nycticorax leuconotus Reichw. V. A. i. p. 363.

Several times recorded from the Sudan, from both White and Blue Niles.

Botaurus stellaris stellaris.

Ardea stellaris Linn. Syst. Nat. 10th ed. 1758, p. 144 : Europe, restricted type-locality Sweden.

Botaurus stellaris Reichw. V. A. i. p. 364 ; Butler, Ibis, 1905, p. 373.

[B. coll.] 1 Khartoum Apl. 13.

The Bittern is not a regular winter visitor to the Sudan, but has occurred on several occasions.

Family SCOPIDÆ.

Scopus umbretta bannermani.

Scopus umbretta bannermani Claude Grant, Bull. B. O. C. xxxv. 1914, p. 27 : Mt. Leganisho, B.E.A.

Scopus umbretta apud Reichw. V. A. i. p. 353 ; Butler, Ibis, 1905, p. 377, 1908, p. 255, 1909, p. 89.

[B. coll.] 2 Raffali Feb. B.G.

[C. & L. coll.] 1 nr. Melut Jan. U.N.

Family BALÆNICIPITIDÆ.

Balæniceps rex.

Balæniceps rex Gould, P. Z. S. 1851, p. 1, pl. 35 : Upper White Nile ; Reichw. V. A. i. p. 357 ; Butler, Ibis, 1905, pp. 373-377, 1908, p. 255.

[B. coll.] 2 (pull.) Bahr el Ghazal Apl. 14.

The Whale-headed Stork occurs on the White Nile south of Lake No, and occasionally to the north of it, also on the Jur, Bahr el Ghazal, and Sobat. For a description of its habits, see Butler, Ibis, 1905, pp. 373-377.

Family CICONIIDÆ.

Ciconia ciconia ciconia.

Ardea ciconia Linn. Syst. Nat. 10th ed. 1758, p. 142 : Europe, Asia, and Africa, restricted type-locality Sweden.

Ciconia ciconia Reichw. V. A. i. p. 345.

Ciconia alba Bechst. ; Butler, Ibis, 1905, p. 378.

The White Stork is a common winter visitor.

Ciconia nigra.

Ardea nigra Linn. Syst. Nat. 10th ed. 1758, p. 142 : Northern Europe.

Ciconia nigra Reichw. V. A. i. p. 346 ; Butler, Ibis, 1905, p. 378, 1908, p. 255.

Also a winter visitor, but not so common as the White Stork.

Abdimia abdimi.

Ciconia abdimii Licht. Verz. Doubl. 1823, p. 76 : Dongola, Sudan ; Butler, Ibis, 1905, p. 378, 1908, p. 255.

Abdimia abdimi Reichw. V. A. i. p. 343.

[Chr. coll.] 1 Meridi Meh. B.G.

Dissoura episcopus microscelis.

Ciconia microscelis G. R. Gray, Gen. Birds, iii. 1848, p. 561, pl. 151.

Dissoura microscelis Reichw. V. A. i. p. 347.

Dissura episcopus apud Butler, Ibis, 1905, p. 379.

[B. coll.] 1 Kenisa May, Mon.

[C. & L. coll.] 1 nr. Melut, 1 nr. Meshra Zeraf Jan. U.N.

Reichenow (*l. c.*) has pointed out the difference between the Indian and African forms of the Woolly-necked Stork, and attaches Gray's non-descript name to the latter. Gray's figure appears to represent an African bird, though he nowhere states as much.

Ephippiorhynchus senegalensis.

Micteria senegalensis Shaw, Tr. Linn. Soc. v. 1798, p. 35, pl. 3 : Senegal ; Butler, Ibis, 1905, p. 379, 1908, p. 255.

Ephippiorhynchus senegalensis Reichw. V. A. i. p. 341.

[C. & L. coll.] 1 Kodok Jan. **U.N.**

[Chr. coll.] 1 (no original label).

Leptoptilus crumeniferus.

Ciconia crumenifera Less. *Traité*, 1831, p. 585 : Senegal.

Leptoptilus crumenifer Reichw. V. A. i. p. 338 ; Butler, *Ibis*, 1905, p. 381, 1908, p. 256.

Fairly common and widely distributed.

Anastomus lamelligerus.

Anastomus lamelligerus Temm. *Pl. Col.* v. 1823, pl. 236 : Africa ; Reichw. V. A. i. p. 335 ; Butler, *Ibis*, 1905, p. 381, 1908, p. 256.

[B. coll.] 2 Malakal May, **U.N.**

[C. & L. coll.] 1 Lake No Feb. **U.N.**

Ibis ibis.

Tantalus ibis Linn. *Syst. Nat.* 12th ed. i. 1766, p. 241 : Egypt.

Pseudotantalus ibis Reichw. V. A. i. p. 333 ; Butler, *Ibis*, 1905, p. 381.

The African Wood-Ibis is widely distributed. There happen to be no examples in the present collections.

Family PLATALEIDÆ.

Platalea leucorodia.

Platalea leucorodia Linn. *Syst. Nat.* 10th ed. 1758, p. 139 : Europe, restricted type-locality S. Sweden ; Reichw. V. A. i. p. 330 ; Butler, *Ibis*, 1908, p. 272.

Platalea alba.

Platalea alba Scopoli, *Del. Flor. et Faun. Insubr.* ii. 1786, p. 92 (ex Sommerat, Luzon!) : probably Cape of Good Hope ; Reichw. V. A. i. p. 331 ; Butler, *Ibis*, 1905, p. 372.

Both the European and African Spoonbills are widely distributed in the Sudan, though the African does not extend to the northern portions of the country nor the European to the southern.

Family PLEGADIDÆ.

Plegadis falcinellus.

Tantalus falcinellus Linn. Syst. Nat. 12th ed. i. 1766,
p. 241 : Habitat in Austria, Italia.

Plegadis falcinellus Butler, Ibis, 1905, p. 372.

Plegadis autumnalis apud Reichw. V. A. i. p. 329.

[C. & L. coll.] 1 Meshra Zeraf Jan. U.N.

Threskiornis æthiopica.

Tantalus æthiopicus Lath. Ind. Orn. 1790, p. 706 :
Æthiopia.

Ibis æthiopica Reichw. V. A. i. p. 321 ; Butler, Ibis, 1905,
p. 371, 1908, p. 254.

[B. coll.] 2 Malakal May, U.N.

[C. & L. coll.] 1 40 miles south of Jebelein, U.N.

Comatibis eremita.

Upupa eremita Linn. Syst. Nat. 10th ed. 1758, p. 118 :
Switzerland.

Geronticus eremita Reichw. V. A. i. p. 323.

Not common ; there is a specimen in the Museum from
Suakin collected by Penton, and it is recorded from the
Blue Nile by Flower.

Hagedashia hagedash nilotica.

Hagedashia hagedash nilotica Neum. Orn. xiii. 1909,
p. 193 : nr. Adis Abeba, Abyssinia.

Theristicus hagedash (Lath.) ; Reichw. V. A. i. p. 325.

Geronticus hagedash (Lath.) ; Butler, Ibis, 1905, p. 372,
1908, p. 254, 1909, p. 89.

[B. coll.] 1 Malakal May, 1 Upper Nile "summer,"
1 Lake No May, U.N. ; 1 Raffali Feb. B.G.

[C. & L. coll.] 1 Senga Dec. Sen. ; 1 nr. Jebelein Jan.,
1 Lake No Feb. U.N.

For a list of the races of the Hagedash Ibis, see Neumann,
op. cit., and Zedlitz, J. f. O. 1914, p. 640.

Family BALEARICIDÆ (*i. e.*, GRUIDÆ auct.).**Megalornis grus grus.**

Ardea grus Linn. Syst. Nat. 10th ed. 1758, p. 141 :
Europe, restricted type-locality Sweden.

Grus grus Reichw. V. A. i. p. 261.

Grus communis Bechst.; Butler, Ibis, 1905, p. 394.

[C. & L. coll.] 1 Singa Dec. **Sen.**

A winter migrant in large numbers.

Anthropoides virgo.

Ardea virgo Linn. Syst. Nat. 10th ed. 1758, p. 141 :
Habitat in Oriente.

Anthropoides virgo Reichw. V. A. i. p. 263.

Grus virgo Butler, Ibis, 1905, p. 394.

[C. & L. coll.] 2 mouth of Sobat river Jan. **U.N.**

The Demoiselle Crane visits the northern Sudan in winter, but is not so abundant as the last species.

Balearica pavonina ceciliæ.

Balearica ceciliæ Mitchell, Abstr. P. Z. S. 1904, No. 10,
p. 13: White Nile near Khartoum; Butler, Ibis, 1908,
p. 260.

Balearica pavonina apud Butler, Ibis, 1905, p. 393.

[B. coll.] 1 (pull.) Senga Nov. **Sen.**; 1 Kaka June,
U.N.; 1 (head and neck only) "Sudan."

[C. & L. coll.] 1 nr. Singa Dec. **Sen.**; 2 Kaka Jan.,
1 Tonga Feb., 2 Kodok Mch. **U.N.**

Widely distributed, in places abundant. For the forms and distribution of the Crowned Crane, see Mitchell, P. Z. S. 1904, pp. 200-205.

Family OTIDIDÆ.

Otis (Eupodotis) arabs arabs.

Otis arabs Linn. Syst. Nat. 10th ed. 1758, p. 154 :
Habitat in Oriente; Reichw. V. A. i. p. 243 (part.).

[B. coll.] 1 Gedaref Apl. **Kas.** (head and neck only).

[C. & L. coll.] 1 Sinkat Mch. **R.S.** (head and wing
only).

Otis (Eupodotis) arabs stieberi.

Otis arabs stieberi Neum. J. f. O. 1907, p. 307: Kusseri, Shari river.

[B. coll.] 1 Minawi Estate, El Damer, Ber.

[C. & L. coll.] 1 Melut Jan., 1 Lake No Feb., 1 Bahr el Zeraf Feb. U.N.

This race, separated by Neumann on account of the colour of the crown, which is gold and black, and not grey and black, seems to extend from the Nile valley westwards. There is a specimen of this race in the Museum from 30 miles S.W. of Rabat, Morocco. The El Damer bird is most certainly of this race, while the Gedaref bird belongs equally certainly to the other. Southern birds, while nearer to this race than to *O. a. arabs*, are as a rule darker on the crown than northern birds, as is exemplified by the specimen from the Bahr el Zeraf and by one or two others in the Museum collection. The range of *O. a. arabs* is from southern Arabia and the Red Sea Coast to Eritrea and Kassala.

The range of *O. a. stieberi* is from the Nile Valley to western Morocco and south to the Shari River.

Otis arabs is the commonest of the large Bustards of the Sudan. The specimen recorded by Ogilvie-Grant (Ibis, 1902, p. 453) as *Eupodotis kori*, which was collected by Hawker at Renk, proves on further examination to be an example of *O. a. stieberi*.

Otis (Neotis) cafra denhami.

Otis denhami Childr. in Denh. & Clapp. Trav. ii. 1826, p. 199: Interior of N. W. Africa; Reichw. V. A. i. p. 245: Butler, Ibis, 1908, p. 260.

Confined to the western side of the Sudan, Kordofan, and the western Bahr-el-Ghazal whence it ranges across to Lake Chad. There are very few examples of this fine Bustard in collections. The largest specimen in the British Museum, one obtained by Petherick in Kordofan, has a wing of approximately 630 mm. The large size of the bill is at once evident when compared with typical *O. c. cafra*, though in coloration they are not unlike.

Otis (Neotis) burchelli.

Eupodotis burchellii Heugl. J. f. O. 1867, p. 301 : Jebel Dul, south of Sennar.

Otis burchelli Reichw. V. A. i. p. 246.

Nothing further has been discovered about this species since Heuglin's original description, or have any other specimens come to light. There is an excellent figure in Heuglin's Orn. Nordost-Afr. pl. xxxi. of a very fine-looking Bustard of the size of *O. cafra*, with a black face, throat, and crop, and a red back to the neck.

Otis (Lissotis?) nuba.

Otis nuba Cretzschmar, Atlas, 1826, p. 1, pl. i. : Nubia ; Reichw. V. A. i. p. 247 ; Butler, Ibis, 1905, p. 391.

Mr. Butler records this Bustard from Kordofan, west of Omdurman, and from near "Summit" on the Red Sea Railway.

Otis (Lissotis) melanogaster.

Otis melanogaster Rüpp. Neue Wirb. 1835, p. 16, pl. vii. : Lake Tsana ; Reichw. V. A. i. p. 256.

Lissotis lovati Grant ; Butler, Ibis, 1905, p. 391 (part.), 1908, p. 260.

[B. coll.] 1 Malakal May, 1 Khor Filus June, U.N. ; 1 Mongalla May, Mon. ; 1 Rejaf Feb. L.E.

[C. & L. coll.] 1 nr. Tonga, 1 nr. Lake No, 1 between Zeraf and Sobat Rivers, 1 lat. $9\frac{1}{2}^{\circ}$ N., long. 31° E. Feb. U.N.

Ogilvie-Grant in 'The Ibis,' 1902, pp. 453-457, renamed this bird *Lissotis lovati*, as was pointed out by Oberholser, P. U.S. Nat. Mus. xxviii. 1905, p. 836. Both, however, agreed that there were two species, one with much white on the wings and one with little, and Oberholser named the latter *Lissotis notophila*, fixing Durban as the type-locality. On examining the material in the Museum, however, we found that a series of these Bustards from Natal and elsewhere collected by Claude Grant, and which Mr. Ogilvie-Grant had not seen when writing his paper, had since arrived in the Museum. These show at once that the South African form has also

the large amount of white on the wing, and is, as far as we can see, inseparable from true *Otis melanogaster* Rüpp. We must therefore agree with Reichenow that there is only one species, and must place *L. lovati* O.-Grant and *L. notophila* Oberholser as synonyms. The only birds which we can find which do not have the large amount of white on the wing are undoubtedly not fully adult, with only two exceptions, both from Nyasaland. There is, of course, some slight variation in the amount of white in adults from other parts of Africa, but nothing like the amount depicted by Ogilvie-Grant, except for these two Nyasaland specimens, one of which may very well have been the actual specimen figured by him. Further material from that country therefore will be of interest, but, should this difference prove consistent, the race will require a new name.

Otis (Lissotis) hartlaubi.

Otis hartlaubi Heuglin, J. f. O. 1863, p. 10: East Sennar; Reichw. V. A. i. p. 259.

[B. coll.] 1 Gedaref May, Kas.

[C. & L. coll.] 1 Kaka, 1 Melut, 1 White Nile lat. $10\frac{1}{2}^{\circ}$ N.
Jan. U.N.

Otis (Trachelotis) senegalensis senegalensis.

Otis senegalensis Vieill. Enc. Méthod. i. 1820, p. 333: Senegal; Reichw. V. A. i. p. 250; Butler, Ibis, 1905, p. 390.

This Bustard ranges from Senegal to the Nile Valley, being most frequent in the red sandstone country of Kordofan. This is the only specimen in the Museum from the Sudan, and it appears to be even redder on the back and with finer vermiculations than the examples from Senegal and Lake Chad. Whether this is individual or not we cannot say.

Family BURHINIDÆ.

Ædicnemus ædicnemus ædicnemus.

Charadrius ædicnemus Linn. Syst. Nat. 10th ed. 1758, p. 151: England.

[C. & L. coll.] 1 Sinkat Meh. R.S.

There are in the Museum four Stone-Curlews from north-eastern Africa. They are all in worn plumage, and at first sight they all appear to differ considerably. There are two from the Red Sea Province, one from Lake Zwai in Abyssinia, and one from Sugsoda in Somaliland. These birds Dr. Hartert was kind enough to examine, and we agree with his conclusions. The Somaliland bird is so pale and small, wing 214 mm. (very worn), that it may even prove to be a resident race in Somaliland. The other three Dr. Hartert considers must be regarded as more or less aberrant examples of the typical race. A larger series of these birds from Africa would be of considerable interest.

Ædicnemus senegalensis.

Ædicnemus senegalensis Swains. Bds. of W. Africa, ii. 1837, p. 228: Senegal; Reichw. V. A. i. p. 197; Butler, Ibis. 1905, p. 398, 1908, p. 262, 1909, p. 90.

[B. coll.] 1 Sherif Yakub June, **B.N.**; 1 Roseires May, **Sen.**; 1 Kadaru Jan. **Kh.**; 1 Lake No May, 1 Hillet Nuer May, **U N.**; 1 Shambé Jan. **Mon.**; 1 Chak Chak, 1 Raffali Feb. **B.G.**

[C. & L. coll.] 1 Kamisa Dec. **Sen.**; 2 Tonga Feb. Mch., 2 near Lake No Feb., 1 White Nile lat. $9\frac{1}{2}^{\circ}$ N. long. 31° E. Feb. **U.N.**

Very widely distributed.

Ædicnemus capensis capensis.

Ædicnemus capensis Licht. Verz. Doubl. 1823, p. 69: Cape of Good Hope.

(Ædicnemus capensis capensis) Claude Grant, Ibis, 1915, p. 63.

[B. coll.] 1 Wau Apl. **B.G.**

We agree with Claude Grant, *op. cit.*, that East African specimens of *Æ. capensis* cannot be separated from the typical form. This single example from the Bahr el Ghazal we are also unable to separate from that form. The dark and heavily marked back and breast at once distinguish it from *(Æ. c. affinis)*. This is, of course, considerable extension of range of *Æ. c. capensis*.

Ædicnemus capensis affinis.

Ædicnemus affinis Rüppell, Mus. Senck. ii. 1837, p. 210 : Kordofan ; Butler, Ibis, 1908, p. 262, 1909, p. 90.

[B. coll.] 1 Jebelein Jan. **W.N.** ; 1 Lake No Jan. **U.N.**

[C. & L. coll.] 2 nr. Tonga Feb., 1 White Nile lat. 10° N. Jan. **U.N.**

These birds are probably typical *Æ. c. affinis*, though we have no Kordofan examples with which to compare them. Claude Grant, Ibis, 1915, p. 63, unites with this form the Somaliland birds, but we are by no means certain that this is correct, the latter appearing to us to be lighter and more finely striped on the back, while on the underside the striping is continued further down the breast and the ground-colour is not so white. Possibly the Somaliland form is the same as that described by Zedlitz from Dahlak Island in the Red Sea under the name of *Æ. c. ehrenbergi* (O. M. 1910, p. 9).

Family DROMADIDÆ.

Dromas ardeola.

Dromas ardeola Payk. Vet.-Ak. Handl. Stockh. xxvi. 1805, p. 182, pl. 8 : India ; Reichw. V. A. i. p. 202.

[B. coll.] 2 Port Sudan May, **R.S.**

Family GLAREOLIDÆ.

***Glareola pratincola limbata* ?**

Glareola limbata Rüpp. Syst. Uebers. Vög. Nordost-Afr. 1845, p. 113 : Djeddah = Jiddah, Red Sea coast of Arabia.

Glareola pratincola apud Butler, Ibis, 1905, p. 400.

[B. coll.] 6 Khartoum Dec., Feb., Apl. 18.

[C. & L. coll.] 2 Bahr el Zeraf Feb. **U.N.**

We are very uncertain as to whether these Pratincoles are really *G. p. limbata*—or, indeed, as to whether that race can really be separated from *G. p. pratincola* at all. Dr. Hartert gives a review of the races in Nov. Zool. xxiii. pp. 89–91, and says that this race is resident in Africa and is not a winter

migrant. Unfortunately all our specimens happen to be winter birds, and Mr. Butler looked on it also as only a winter migrant. We have, therefore, no summer birds from within our limits to compare with those from elsewhere. As to coloration we can see very little difference indeed between N.W. African, N.E. African, and European birds, though some of the N.W. African examples are certainly darker and somewhat approach *G. p. fülleborni* of south-eastern Africa, which is undoubtedly a resident race.

Glareola nordmanni.

Glareola nordmanni Fischer, Bull. Soc. Imp. Nat. Moscou, xv. 1842, p. 314: S. Russia.

Glareola melanoptera auct., Reichw. V. A. i. p. 145.

[B. coll.] 1 Mongalla Oct. Mon.

A winter migrant to tropical and South Africa.

Glareola (Galachrysis) nuchalis nuchalis.

Glareola nuchalis Gray, P. Z. S. 1849, p. 63, pl. 9: 5th Cataract of the Nile.

This bird, only known from the type, was secured by Galton at the 5th Cataract near Berber, and the British Museum Catalogue of Birds is therefore wrong in giving the Upper White Nile as its habitat. From an examination of the material in the Museum, it appears that the white and red-necked forms of this bird intergrade, and they are therefore best considered as one species.

Glareola (Galachrysis) nuchalis emini.

Glareola emini Shelley, P. Z. S. 1888, p. 49: Foda, Wadelai.

This race appears just to enter the southern limits of the Anglo-Egyptian Sudan.

The races of *G. nuchalis* appear to be:—

1. *G. N. NUCHALIS* Gray, *op. cit.*

Only known from the 5th Cataract. A small race with a wing of 140 mm., and with white borders to the bases of the outer webs of the secondaries. Neck-band white.

2. *G. N. EMINI* Shelley, *op. cit.*

Type from Wadelai and ranging thence to Abyssinia, to the Welle and Ubanghi rivers, the hinterland of Cameroon, and south through the Belgian Congo to the Zambesi. Possibly a migrant over part of its range. A larger race, wing average 150 mm. No white on the outer webs of the secondaries. Neck-band white.

3. *G. N. MARCHEI*.

Glareola nuchalis var. *marchei* Oust. Bull. Soc. Philom. 7th series, i. 1877, pp. 104, 105: Ogowe River, Gaboon.

This may possibly prove to be identical with *G. n. emini*, but Oustalet's measurements are very small, wing only 125 mm. We have no specimens from that locality. Neck-band white, no white on the outer webs of the secondaries.

4. *GLAREOLA NUCHALIS LIBERIÆ*.

Glareola nuchalis liberie Schleg. Notes Leyden Mus. 1881, p. 58: Liberia.

Similar to *G. n. emini*, but with the neck-band as a rule rich chestnut. There are, however, specimens before us from the Gold Coast with an intermediate light rusty-coloured neck-band, and Reichenow mentions that in Cameroon Conrau found both forms together.

This race extends from Cameroon to Liberia.

In the O. M. 1908, p. 191, Reichenow has described as *Glareola antania* a Pratincole from the Ituri district similar to *G. nuchalis*, but with no neck-band at all. The only specimens we can find without neck-bands are either young birds or skins in which the neck has been damaged in the skinning. Should it prove to be a good race, it must occupy a restricted area, as we have specimens of *G. n. emini* from all sides of it.

The group of Pratincoles to which this species belongs is frequently separated from *Glareola* under the name *Galactochrysea*—or, as originally spelt, *Galachrysia*.

Family CURSORIDÆ.

Ortyxelos meiffreni.

Turnix meiffreni Vieill. Nouv. Dict. xxxv. 1818, p. 49 :
Senegal.

Ortyxelos meiffreni Reichw. V. A. i. p. 162 ; Butler, Ibis,
1905, p. 386.

[B. coll.] 1 El Obeid Mch. Kor.

The specimens in the Museum from Senegal are hardly in sufficiently good order for comparison, but it may be worthy of remark that of five from the neighbourhood of Lake Chad, while no two of them are alike, all differ considerably from Kordofan examples.

Pluvianus ægyptius.

Charadrius ægyptius Linn. Syst. Nat. 10th ed. 1758,
p. 150 : Egypt.

Pluvianus ægyptius Reichw. V. A. i. p. 150 ; Butler, Ibis,
1905, p. 399, 1908, p. 263.

[B. coll.] 1 Blue Nile Apl. ; 1 Chak Chak Feb. B.G.

[C. & L. coll.] 1 White Nile lat. 14° N. Jan. W.N.

[Chr. coll.] 2 Wau July, Aug. B.G.

Cursorius gallicus gallicus.

Charadrius gallicus Gmel. Syst. Nat. i. pt. 2, 1789,
p. 692 : France.

Cursorius gallicus Butler, Ibis, 1905, p. 400.

[B. coll.] 1 Shendi Mch. Ber. ; 6 Khartoum Jan. Feb.
Nov., 1 Omdurman Apl. Kh.

[C. & L. coll.] 1 nr. Sennar Jan. Sen.

These Coursers all seem indistinguishable from typical examples of *C. g. gallicus*, nor can we recognise *C. g. kordofanensis* Wettstein, Anz. K. Akad. Wien, 1916, no. 13, p. 131 : El Obeid, as being in any way distinct. The character of the yellow-washed chin and under tail-coverts seems to occur in many specimens from the shores of the Mediterranean, and, as a matter of fact, a single bird before us from El Obeid is somewhat light-coloured in those respects.

Cursorius temmincki.

Cursorius temmincki Swains. Zool. Illustr. ii. 1822, pl. 106: Senegal; Reichw. V. A. i. p. 155.

This Courser has been recorded, under the name of *Cursorius senegalensis*, from Sennar and easterly Kordofan by Heuglin. We know of no recent occurrences.

Rhinoptilus chalcopterus chalcopterus.

Cursorius chalcopterus Temm. Pl. Col. livr. 50, 1824, pl. 298: Senegal.

Rhinoptilus chalcopterus Reichw. V. A. i. p. 157; Butler, Ibis, 1905, p. 400, 1908, p. 263.

[B. coll.] 2 Pongo River Mch. B.G.

[C. & L. coll.] 2 White Nile lat. $9\frac{1}{2}$ ° N. long. $30^{\circ} 40'$ E. Feb. U.N.

Neumann has separated the southern race of this bird, owing to its alleged darker colour, as *R. c. obscurus* (O. M. 1910, p. 11). It appears to us to be separable only with great difficulty from Sudanese examples. *Rhinoptilus albofasciatus* (Sharpe, Bull. B. O. C. iii. 1893, p. xiv: South Africa) we regard as the young of *R. chalcopterus*—at least all the examples of this form before us, whatever their locality, are immature birds.

Rhinoptilus cinctus cinctus.

Hemerodromus (Cursorius) cinctus Heugl. J. f. O. 1863, p. 25: Gondokoro.

Rhinoptilus cinctus cinctus Zedlitz, J. f. O. 1914, p. 624.

This species has not apparently been obtained in the Anglo-Egyptian Sudan since Heuglin's time. Zedlitz (*op. cit.*) has given a revision of the races.

Family JACANIDÆ.

Actophilus africanus.

Parra africana Gmelin, Syst. Nat. i. pt. 2, 1789, p. 709: Africa, restricted type-locality, Abyssinia (*cf.* Claude Grant, Ibis, 1915, p. 59).

Actophilus africanus Reichw. V. A. i. p. 267.

Phyllopezus africanus Butler, Ibis, 1905, p. 394, 1908, p. 261.

[B. coll.] 1 Meshra Rôm Feb., 3 Reuk May, 1 Lake No Mch. **U.N.**; 1 Mongalla "summer," **Mon.**; 1 Meshra el Rek Mch. **B.G.**

[C. & L. coll.] 1 Jebelein Jan., 2 Lake No Feb. **U.N.**

[Chr. coll.] 1 Wau July, **B.G.**

Microparra capensis.

Parra capensis A. Smith, Ill. Zool. S. Afr., Birds, 1839, pl. 32: Algoa Bay.

Microparra capensis Reichw. V. A. i. p. 270.

[C. & L. coll.] 1 mouth of Zeraf River Mch. **U.N.**

Previously obtained within our limits by Hawker at Fashoda, the only other Sudanese record known to us.

FAMILY SCOLOPACIDÆ.

Gallinago gallinago gallinago.

Scolopax gallinago Linn. Syst. Nat. 10th ed. 1758, p. 147: Europe, restricted type-locality Sweden.

Gallinago gallinago Reichw. V. A. i. p. 237.

Gallinago cælestis (Frenz.); Butler, Ibis, 1905, p. 398, 1908, p. 262.

[C. & L. coll.] 1 Taufikia Jan. **U.N.**

The Common Snipe is widely distributed in winter, never in very large numbers together (*A. L. B.*).

Gallinago nigripennis.

Gallinago nigripennis Bp. Icon. Faun. Ital., Ucc. 1832, p. 4 of text to pl. 43: Cape.

The Ethiopian Snipe is recorded from Lado by Emin.

Gallinago media.

Scolopax media Latham, Gen. Synops. Suppl. i. 1787, p. 292: England.

[B. coll.] 4 Lado Apl. 15-18, **L.E.**

Limnocryptes gallinula.

Scolopax gallinula Linn. Syst. Nat. 12th ed. i. 1766, p. 244: France.

Gallinago gallinula Butler, Ibis, 1905, p. 398, 1908, p. 262.
[B. coll.] 1 Kawa Nov. **W.N.**

The Jack-Snipe is not at all common.

Canutus canutus canutus.

Tringa canutus Linn. Syst. Nat. 10th ed. 1758, p. 149: Europe, restricted type-locality Sweden; Reichw. V. A. i. p. 229.

The Knot is recorded from Khartoum, Sennar, and the Blue Nile by Vierthaler. There are no recent records.

Pisobia minuta minuta.

Tringa minuta Leisler, Nachtr. zu Bechst. Naturg. Deutschl. 1812, p. 74: Hanau, Germany; Reichw. V. A. i. p. 233; Butler, Ibis, 1905, p. 396.

[B. coll.] 1 Khartoum Dec.

[C. & L. coll.] 1 nr. Senga Dec. **Sen.**; 1 Hassania Island Jan., 1 White Nile lat. 14° N. Jan. **W.N.**; 1 Renk Mch. **U.N.**

The Little Stint is abundant in winter.

Pisobia temmincki.

Tringa temminckii Leisler, Nachtr. zu Bechst. Naturg. Deutschl. 1812, p. 78: Hanau, Germany; Reichw. V. A. i. p. 234.

[C. & L. coll.] 1 Kosti Mch. **W.N.**

Temminck's Stint has previously been recorded from Kordofan by Petherick, and from Kordofan and the White Nile by Heuglin.

Pelidna alpina alpina.

Tringa alpina Linn. Syst. Nat. 10th ed. 1758, p. 149: Lapland; Reichw. V. A. i. p. 229.

The Dunlin is recorded by Heuglin from Nubia, Sennar, Kordofan, Lake Tsana, and Suakin. These records are

ascribed in Reichenow, V. A. i. p. 229, to the British Museum, the name "Heuglin" having been accidentally omitted.

Erolia ferruginea ferruginea.

Tringa ferruginea Brünnich, Orn. Boreal. 1764, p. 53 : Iceland.

Tringa subarquata (Güld.); Reichw. V. A. i. p. 230 ; Butler, Ibis, 1905, p. 396.

[B. coll.] 1 Dueim May, **W.N.**

The Curlew-Sandpiper is abundant along the northern parts of the Blue and White Niles in winter (*A. L. B.*).

Crocethia alba alba.

Tringa alba Vroeg, Cat. Adumb. 1764 (*cf.* British Birds, ix. p. 8 ; page and locality omitted).

Calidris arenaria (Linn.) ; Reichw. V. A. i. p. 227.

Mr. Butler records only one occurrence of the Sanderling, a party of three at Khartoum, one of which was shot. No other records are known to us.

Philomachus pugnax.

Tringa pugnax Linn. Syst. Nat. 10th ed. 1758, p. 148 : Europe ; restricted type-locality Sweden.

Totanus pugnax Reichw. V. A. i. p. 216.

Pavoncella pugnax Butler, Ibis, 1905, p. 397, 1908, p. 262, 1909, p. 405.

[B. coll.] 4 Khartoum Jan. Feb. Oct. ; 1 Dueim Nov. **W.N.**

[C. & L. coll.] 5 near Senga Dec. **Sen.**

The Ruff is abundant in winter.

Totanus totanus.

Scolopax totanus Linn. Syst. Nat. 10th ed. 1758, p. 145 : Europe, restricted type-locality Sweden.

Totanus totanus Reichw. V. A. i. p. 220.

Totanus calidris (Linn.) ; Butler, Ibis, 1905, p. 397.

The Redshank is a winter visitor, but not common.

Totanus (Iliornis) stagnatilis stagnatilis.

Totanus stagnatilis Bechst. Orn. Taschenb. ii. 1803, p. 292 : Germany ; Reichw. V. A. i. p. 220 ; Butler, Ibis, 1905, p. 397, 1908, p. 262.

[C. & L. coll.] 3 nr. Senga Dec. Sen. ; 1 Reuk Mch. U.N.

The Marsh-Sandpiper is tolerably common in winter.

Totanus (Glottis) nebularius nebularius.

Scolopax nebularius Gunnerus in Leem, Beskr. Finm. Lapp. 1767, p. 251 : Norway.

Totanus littoreus (Linn.) ; Reichw. V. A. i. p. 217.

Totanus canescens (Gm.) ; Butler, Ibis, 1905, p. 397.

[B. coll.] 1 Roseires Apl. 19, Sen. ; 2 Khartoum Apl. 9, Dec.

[C. & L. coll.] 1 Kosti Jan. W.N.

The Greenshank is a common winter migrant.

Tringa ochropus ochropus.

Tringa ochropus Linn. Syst. Nat. 10th ed. 1758, p. 149 : Europe, restricted type-locality Sweden.

Totanus ochropus Reichw. V. A. i. p. 222 ; Butler, Ibis, 1905, p. 397, 1908, p. 262.

[C. & L. coll.] 1 Kamisa Dec. Sen.

Tolerably common in winter. An eastern race of the Green Sandpiper has been distinguished by Mathews, Austr. Av. Rec. i. 1913, p. 188 : Assam. The distinction is denied by Dr. Hartert and Miss Jackson, Ibis, 1915, p. 534. It seems best, however, to name the western race trinomially for the time being.

Rhyacophilus glareola glareola.

Tringa glareola Linn. Syst. Nat. 10th ed. 1758, p. 149 : Europe, restricted type-locality Sweden.

Totanus glareola Reichw. V. A. i. p. 222 ; Butler, Ibis, 1905, p. 397, 1908, p. 405.

The Wood-Sandpiper is fairly common, like the last species.

Actitis hypoleuca.

Tringa hypoleucos Linn. Syst. Nat. 10th ed. 1758, p. 149: Europe, restricted type-locality Sweden.

Tringoides hypoleucos Reichw. V. A. i. p. 224.

Totanus hypoleucus Butler, Ibis, 1905, p. 397, 1908, p. 262, 1909, pp. 90, 405.

[Chr. coll.] 2 Meridi Jan. Feb. **B.G.**; 1 Yei Nov. **L.E.**

The Common Sandpiper is found in winter wherever there is water.

Limosa limosa limosa.

Scolopax limosa Linn. Syst. Nat. 10th ed. 1758, p. 147: Europe, restricted type-locality Sweden.

Limosa limosa Reichw. V. A. i. p. 213.

Limosa algocephala (Linn.); Butler, Ibis, 1905, p. 397.

[B. coll.] 1 Omdurman Nov. **Kh.**

[C. & L. coll.] 2 White Nile lat. 15° N. **W.N.**

The Black-tailed Godwit is sometimes very abundant in winter.

Limosa (Vetola) lapponica lapponica.

Scolopax lapponica Linn. Syst. Nat. 10th ed. 1758, p. 147: Lapland.

Limosa lapponica Reichw. V. A. i. p. 212.

The Bar-tailed Godwit is recorded by Brehm from "Nubia," but there are no definite records nearer than "Red Sea coast" given by Heuglin.

Numenius arquata arquata.

Scolopax arquata Linn. Syst. Nat. 10th ed. 1758, p. 145: Europe, restricted type-locality Sweden.

Numenius arquatus Reichw. V. A. i. p. 209; Butler, Ibis, 1905, p. 397.

[B. coll.] 1 Mongalla "July-Sept." **Mon.**

Numenius (Phæopus) phæopus phæopus.

Scolopax phæopus Linn. Syst. Nat. 10th ed. 1758, p. 146: Europe, restricted type-locality Sweden.

Numenius phaeopus Reichw. V. A. i. p. 210; Butler, Ibis, 1905, p. 397.

Both the Curlew and Whimbrel occur fairly commonly in winter and spring.

Family ROSTRATULIDÆ.

Rostratula bengalensis.

Rallus benghalensis Linn. Syst. Nat. 10th ed. 1758, p. 153 : Asia.

Rostratula bengalensis Reichw. V. A. i. p. 237.

Rhynchæa capensis (Linn.) ; Butler, Ibis, 1905, p. 398.

Not a common bird in the Sudan.

Family RECURVIROSTRIDÆ.

Recurvirostra avosetta.

Recurvirostra avosetta Linn. Syst. Nat. 10th ed. 1758, p. 151 : Öland.

Recurvirostra avocetta Reichw. V. A. i. p. 206 ; Butler, Ibis, 1905, p. 398.

The Avocet is scarce in the Sudan, though to be found on the lower Blue and White Niles and northwards.

Himantopus himantopus.

Charadrius himantopus Linn. Syst. Nat. 10th ed. 1758, p. 151 : Southern Europe.

Himantopus himantopus Reichw. V. A. i. p. 207.

Himantopus candidus Bonn. ; Butler, Ibis, 1905, p. 398.

[C. & L. coll.] 1 Tonga Feb. U.N.

The Stilt is common and widely distributed.

Two other Waders which might be expected to occur in the Sudan, but of which there is as yet no definite record, are the Terek Sandpiper, *Terekia cinerea*, and the Spotted Redshank, *Totanus (Erythroscelus) fuscus*. Both have occurred on the shores of the Red Sea to the south of Port Sudan.

Family CHARADRIIDÆ.

Squatarola squatarola squatarola.

Tringa squatarola Linn. Syst. Nat. 10th ed. 1758, p. 149: Europe, restricted type-locality Sweden.

Squatarola squatarola Reichw. V. A. i. p. 163.

The Grey Plover is recorded from "Nubia" by Hemprich and Ehrenberg, from Suakin by Heuglin, and from Kordofan by Petherick.

Pluvialis dominicus fulvus.

Charadrius fulvus Gmelin, Syst. Nat. i. pt. 2, 1789, p. 687: Tahiti; Butler, Ibis, 1908, p. 261.

Charadrius dominicus fulvus Reichw. V. A. i. p. 166.

In Mr. Butler's notes occurs the following:—"I once saw one of these Golden Plovers (with grey axillaries) being carried about the streets of Khartoum for sale." It has been recorded from Abyssinia by Hemprich and Ehrenberg, and from Somaliland by Revoil.

Charadrius hiaticula tundræ.

Ægialitis hiaticola tundræ P. R. Lowe, Bull. B. O. C. xxxvi. 1915, p. 7: Yenesay Valley, Siberia.

[B. coll.] 1 Khartoum Dec.

There are only three specimens of the Ringed Plover from the Sudan before us, but we are inclined to assign them, as well as nearly all the examples from the east coast and from the interior of Africa, to this smaller and darker race. The larger race seems to be the chief form found on the west coast.

Charadrius dubius curonicus.

Charadrius curonicus Gmelin, Syst. Nat. i. pt. 2, 1789, p. 692: "Curonia," *i. e.* Courland.

Charadrius dubius curonicus Hartert & Jackson, Ibis, 1915, p. 532.

[B. coll.] 1 Khartoum Feb.

[C. & L. coll.] 1 Kamisa Dec. Sen.; 1 Kosti Meh. W.N.; 1 Kodok Meh. U.N.

The Little Ringed Plover is widely distributed in winter.

Charadrius (Leucopoliis) alexandrinus alexandrinus.

Charadrius alexandrinus Linn. Syst. Nat. 10th ed. 1758, p. 150: Egypt.

Ægialitis cantiana (Lath.); Butler, Ibis, 1908, p. 262.

Mr. Butler records Kentish Plovers as abundant at Khartoum in winter, but unfortunately we have no examples at all from the Nile valley. We expect, however, that they would all be of the typical race.

Charadrius (Leucopoliis) alexandrinus seebohmi.

Charadrius alexandrinus seebohmi Hartert & Jackson, Ibis, 1915, p. 529 (nom. nov. pro *Charadrius cantianus minutus* Seebohm, Geogr. Distr. Charadriidæ, 1887, p. 169: Southern shores of Red Sea).

[C. & L. coll.] 1 Port Sudan, 14 Apl. R.S.

This specimen, a male, we believe to be nearest to the above race, though it is slightly large for it, wing 106·5, culmen 15·5 mm. It seems to be somewhat intermediate between *C. a. alexandrinus* and *C. a. seebohmi*. A nest of three eggs, half-incubated, belonged to it.

Charadrius (Helenægialus) pecuarius.

Charadrius pecuarius Temm. Pl. Col. livr. 31, 1823, pl. 183: Cape of Good Hope.

Charadrius varius Vieill. nec Linn., Reichw. V. A. i. p. 171.

Kittlitz's Sand-Plover is recorded from Khartoum by Mr. Butler and from a number of other localities in the Sudan by other authors.

Charadrius (Afroxyechus) tricollaris.

Charadrius tricollaris Vieill. Nouv. Dict. d'Hist. Nat. xxvii. 1818, p. 147: Africa, restricted type-locality Cape Town (cf. Claude Grant, Ibis, 1915, p. 57); Reichw. V. A. i. p. 176.

The Three-banded Plover is recorded by Heuglin from Gallabat.

Charadrius (Eupoda) asiaticus.

Charadrius asiaticus Pallas, Reise Russ. Reichs, ii. 1773, p. 715: S. Tartary; Reichw. V. A. i. p. 167; Butler, Ibis, 1905, p. 396, 1908, p. 261.

[B. coll.] 3 Khartoum Nov. & Dec.; 1 Ajum Jan. B.G.

[C. & L. coll.] 1 White Nile lat. 15° N. W.N.; 1 Taufikia
Jan. U.N.

The Caspian Sand-Plover is abundant and widely distributed in winter.

Charadrius (Pagoa) leschenaulti.

Charadrius leschenaulti Lesson, Dict. Sci. Nat. xlii. 1826 (édition Levrault), p. 36: Pondicherry.

Charadrius geoffroyi Wagler; Reichw. V. A. i. p. 166 et auct.

Ægialitis geoffroyi Butler, Ibis, 1909, p. 405.

The Large Sand-Plover is recorded from "Nubia" by Hemprich and Ehrenberg. Mr. Butler noticed this species at Port Sudan, at which locality some birds remained till as late a date as May 26th.

Charadrius (Eudromias) morinellus

Charadrius morinella Linn. Syst. Nat. 10th ed. 1758, p. 150: Europe, restricted type-locality Sweden.

A specimen is reported by Vierthaler from the Blue Nile, but it seems a very uncertain record. There seems, however, no reason why the Dotterel should not occur in the country in winter.

There are two other Plovers as yet unrecorded from the Sudan which might be expected to occur. One, the Golden Plover, *Pluvialis apricarius* Linn., has been found as far south as Somaliland and Aden, and the other, the western race of the Mongolian Sand-Dotterel, *Charadrius (Cirrepi-desmus) mongolus atrifrons* Wagl., has been recorded from the Red Sea coast to the south of our limits.

Family VANELLIDÆ.

Stephanibyx melanopterus melanopterus.

Charadrius melanopterus Cretzschm. Atlas, 1826, p. 46, pl. 31: Djedda, Arabia.

Stephanibyx melanopterus Reichw. V. A. i. p. 179.

Rüppell records a specimen of this bird from "Nubia." We should not regard it as admissible to the Sudanese list without further confirmation.

Xiphidiopterus albiceps.

Vanellus albiceps Gould, P. Z. S. 1834, p. 45: Quorra River, i. e. Niger.

Xiphidiopterus albiceps Reichw. V. A. i. p. 192; Butler, Ibis, 1909, p. 90.

[B. coll.] 1 Kojali Meh. B.G.

Apparently a rare bird.

Afribyx senegallus senegallus.

Parra senegallus Linn. Syst. Nat. 12th ed. i. 1766, p. 259: Senegal.

Lobivanellus senegallus Reichw. V. A. i. p. 193; Butler, Ibis, 1905, p. 394, 1908, p. 261.

[B. coll.] 2 Malakal May, U.N.; 1 near Bor Jan. Mon.

[C. & L. coll.] 6 near Tonga Feb. U.N.

[Chr. coll.] 1 Yei Dec. L.E.

Common. Neumann (O. M. 1914, p. 9) has described as *A. s. major* a race from the highlands of Abyssinia, which differs from the typical form by its larger size, wing 238–258 mm. against 210–230.

Our own specimens measure 220–235, the average being 230.

Sarciophorus tectus.

Charadrius tectus Bodd. Tabl. Pl. Enl. 1783, p. 51: Senegal.

Sarciophorus tectus Reichw. V. A. i. p. 189; Butler, Ibis, 1905, p. 395, 1908, p. 261, 1909, p. 90.

[B. coll.] 1 Sherif Yakub Apl. B.N.; 1 Tawela Dec. U.N.; 2 Mongalla "summer," Mon.

[C. & L. coll.] 2 Kamisa Dec. Sen.; 1 Jebelcin, 1 mouth of Sobat River Jan. U.N.

Found throughout the Sudan.

Hoplopterus spinosus.

Charadrius spinosus Linn. Syst. Nat. 10th ed. 1758, p. 151: Egypt.

Hoplopterus spinosus Reichw. V. A. i. p. 186; Butler, Ibis, 1905, p. 395, 1908, p. 261, 1909, p. 90.

[B. coll.] 1 Malakal May, U.N.; 1 Shambé Dec. Mon.;
2 (pull.) "Sudan."

[C. & L. coll.] 2 White Nile lat. 12° N. Jan., 1 Melut
Jan., 2 Tonga Feb. U.N.

[Gurney coll.] 1 Meroë Jan. Ber.

Abundant.

Hemiparra crassirostris crassirostris.

Chettusia crassirostris Hartl. J. f. O. 1855, p. 427: Nubia.

Hemiparra crassirostris Reichw. V. A. i. p. 184.

[B. coll.] 1 Bor Feb., 1 near Shambé Jan., 1 Mongalla
"summer," Mon.

Comparatively rare, and mostly recorded from the south
of the country.

Vanellochettusia leucura.

Charadrius leucurus Licht. in Eversm. Reis. Orenb. nach
Buchará, 1823, p. 137: between Kuwan and Jan Darya,
Turkestan.

Chætusia leucura Reichw. V. A. i. p. 183.

Vanellus leucurus Butler, Ibis, 1905, p. 395.

[B. coll.] 3 Khartoum Feb.; 1 near Ducim Feb. W.N.

[C. & L. coll.] 2 near Ginga Dec. Sen.

In winter: Khartoum and White Nile (*A. L. B.*). For
generic name, *vide* Richmond, P. U.S. Nat. Mus. xxxv.
p. 647.

Chettusia gregaria.

Charadrius gregarius Pallas, Reis. Russ. Reichs, i. 1771,
p. 456: Volga.

Chætusia gregaria Reichw. V. A. i. p. 183.

Vanellus gregarius Butler, Ibis, 1905, p. 396.

[B. coll.] 2 Khartoum Jan. & Feb.

[C. & L. coll.] 1 Kamisa Dec. Sen.; 1 Tonga Feb. U.N.

In winter. Rather rare (*A. L. B.*).

Vanellus vanellus.

Tringa vanellus Linn. Syst. Nat. 10th ed. 1758, p. 148:
Europe and Africa, restricted type-locality Sweden.

Mr. W. P. Lowe informs us that on Jan. 12th, 1914, near

Kosti, White Nile Province, he saw and heard a Lapwing, but it was unfortunately too wild to get a shot at. Heuglin (Orn. Nordost-Afr. iii. p. 994) mentions records from "Nubia" and the mouth of the White Nile.

Family ARENARIIDÆ.

Arenaria interpres interpres.

Tringa interpres Linn. Syst. Nat. 10th ed. 1758, p. 148 : Europe and N. America, restricted type-locality Sweden.

Arenaria interpres Reichw. V. A. i. p. 142.

Streptilas interpres Butler, Ibis, 1905, p. 396.

The Turnstone has been recorded from the White Nile by Mr. Butler, and from Suakin by Heuglin.

Family HÆMATOPODIDÆ.

Hæmatopus ostralegus ostralegus.

Hæmatopus ostralegus Linn. Syst. Nat. 10th ed. 1758, p. 152 : Europe and N. America, restricted type-locality Öland ; Reichw. V. A. i. p. 141.

The Oyster-catcher is recorded from Suakin by Penton.

Family LARIDÆ.

Larus canus canus.

Larus canus Linn. Syst. Nat. 10th ed. 1758, p. 136 : Europe, restricted type-locality Sweden.

The Common Gull is recorded by Vierthaler from Khartoum according to Heuglin, Orn. Nordost-Afr. p. 1379: so also is the Great Black-backed Gull! We do not admit either bird to a place in the Sudanese list on present evidence, though there is no inherent impossibility in their occurrence.

Larus cachinnans.

Larus cachinnans Pallas, Zoogr. Rosso-Asiat. ii. 1827, p. 318 : S.E. Russia ; Reichw. V. A. i. p. 42.

The Yellow-legged Herring-Gull is definitely reported by Heuglin from the Red Sea, where it occurs as far south as

Aden and the Somali coast. Heuglin also records Herring-Gulls (though as the common species *L. argentatus*—which is most unlikely) as common on the Nile as far south as the junction of the Blue and White Niles. These records may almost certainly be taken as *L. cachinnans* also.

Larus fuscus fuscus.

Larus fuscus Linn. Syst. Nat. 10th ed. 1758, p. 136 : Europe, restricted type-locality Sweden ; Reichw. V. A. i. p. 41 ; Butler, Ibis, 1905, p. 382, 1909, p. 403.

[B. coll.] 1 Port Sudan May, R.S.

The Lesser Black-backed Gull is common in winter, both in the Nile Valley and on the Red Sea coast.

Larus (Ichthyaëtus) ichthyaëtus.

Larus ichthyaëtus Pallas, Reise Russ. Reichs, ii. 1773, p. 713 : Caspian Sea.

Larus phœnicopus (Gmel.) ; Reichw. V. A. i. p. 46.

The Great Black-headed Gull is recorded from the Red Sea coast, and, though there are as yet no definite records, is almost certain to occur on that part of it which lies within our limits.

Larus (Chroicocephalus) ridibundus.

Larus ridibundus Linn. Syst. Nat. 10th ed. 1758, p. 225 : Habitat in Mari Europæo, restricted type-locality England ; Reichw. V. A. i. p. 47 ; Butler, Ibis, 1908, p. 256.

[B. coll.] 1 Dueim Jan. W.N.

White and Blue Niles in winter, not common.

The Mediterranean Black-headed Gull (*L. melanocephalus*) is reported by Brehm from "Nubia."

Larus (Adelarus) leucophthalmus.

Larus leucophthalmus Temm. Pl. Col. livr. 62, 1825, pl. 366 : Coasts of the Red Sea ; Reichw. V. A. i. p. 48 ; Butler, Ibis, 1909, p. 403.

[B. coll.] 3 Port Sudan May, R.S.

[C. & L. coll.] 5 Port Sudan Dec. & Apl. R.S.

Abundant on the Red Sea Coast.

Larus (Adelarus) hemprichi.

Adelarus hemprichii Bruch, J. f. O. 1853, p. 106: Red Sea.

Larus hemprichi Reichw. V. A. i. p. 49.

[C. & L. coll.] 1 Port Sudan Dec. R.S.

Rhynchops flavirostris.

Rhynchops flavirostris Vieill. Nouv. Dict. iii. 1816, p. 383: Senegal (*op. cit.* xxix. p. 283); Reichw. V. A. i. p. 76; Butler, Ibis, 1905, p. 382.

[B. coll.] 4 Khartoum Apl. Nov. Dec.; 2 (pull.) near Roseires, Sen.

The Skimmer is found on all the larger rivers.

Hydrochelidon leucoptera leucoptera.

Sterna leucoptera Temm. Man. d'Orn. 1815, p. 483: Mediterranean.

Hydrochelidon leucoptera Reichw. V. A. i. p. 71; Butler, Ibis, 1905, p. 382.

[B. coll.] 3 Khartoum Apl. 20 and "autumn"; 8 Fashoda (Kodok) May, U.N.

Hydrochelidon nigra nigra.

Sterna nigra Linn. Syst. Nat. 10th ed. 1758, p. 137: Europe, restricted type-locality Sweden.

Hydrochelidon nigra Reichw. V. A. i. p. 70: Butler, Ibis, 1905, p. 382.

Hydrochelidon leucopareia leucopareia.

Sterna leucopareia Temm. Man. d'Orn. 2nd ed. ii. 1820, p. 746: Hungary.

Hydrochelidon hybrida (Pall.) Reichw. V. A. i. p. 72: Butler, Ibis, 1905, p. 382.

[B. coll.] 3 Khartoum Apl. 23-26.

All three species of *Hydrochelidon* are regular winter migrants to the Nile Valley, *H. nigra* being the least common.

Sterna repressa.

Sterna repressa Hartert, Nov. Zool. xxiii. 1918, p. 288, nom. nov. pro

Sterna albigena Heuglin in Peterman's Mittheilungen, 1861, p. 29: Arabia and Nubia (ex Licht.); Reichw. V. A. i. p. 65.

Common in the Red Sea. There is a specimen from Suakin in the Museum collection obtained by Penton.

Sterna (Sternula) albifrons saundersi?

Sterna saundersi Hume, Stray Feathers, v. 1877, pp. 324-6: Karachi; Butler, Ibis, 1909, p. 403.

[B. coll.] 3 Port Sudan 24 & 26 May, R.S.

Mr. Mathews, in his 'Birds of Australia,' vol. ii. pp. 375-381, has made some interesting remarks on these little Terns, and has indicated some names which may be used for various races. We have examined the large amount of material in the British Museum and confess to be very little the wiser. The type of *S. saundersi* is a bird from Karachi, collected on the 5th of May. It has a decidedly small bill, and the outer and half the inner webs of the three outer primaries are black. The three Port Sudan birds listed above agree with it exactly. They are apparently in full breeding-plumage, but, according to Mr. Butler, were not in breeding condition. They differ from English and western European breeding-birds by their shorter bill and by the black colour of the webs of the three outer primaries, this colour being replaced by grey in the western bird and only occurring on the two outer primaries. They appear also somewhat smaller and paler in colour. Whether or not Hume's name will stand for the race, it is not possible to say from present material, as we have no breeding specimens from South Russia, the type-locality of *Sterna metopoleucos* S. G. Gmelin (Nov. Comm. Acad. Sci. Imp. Petrop. xv. 1771, p. 475), nor has a restricted type-locality been designated for *S. albifrons* (Vroeg, Cat. Adumb. 1764, p. 6: Europe). We suspect, however, that the name will stand, as a specimen from Bokhara obtained in May as well as one from Macedonia appear to be more like the western form.

The small Terns from the east Coast of Africa need a good deal of examination, and a new species (*S. novella*) was described from that region by Hartlaub. We might note also that there are not as yet in the Museum specimens in winter plumage of *S. balenarum* (unless South African examples referred by Saunders to *S. saundersi* are that species), which may and probably will be found to be very similar to the forms of *S. minuta* in winter.

It may be worth noting that Boyd Alexander found Little Terns on the Shari River in June, also that one or two Somaliland examples are much more like the form from western Europe which may very possibly migrate or wander through our limits.

Sterna (Gelocheidon) nilotica nilotica.

Sterna nilotica Gmelin, Syst. Nat. i. 1789, p. 606: Egypt (ex Hasselquist).

Gelocheidon nilotica Reichw. V. A. i. p. 51.

Sterna anglica Montagu; Butler, Ibis, 1905, p. 382, 1908, p. 256.

[B. coll.] 1 White Nile Oct.

[C. & L. coll.] 1 Hassania Island, 1 El Geteina Jan.

W.N.; 1 White Nile lat. $10\frac{3}{4}^{\circ}$ N. U.N.

The Gull-billed Tern is abundant in winter; it is interesting to note that the El Geteina bird is marked 'Feeding on locusts in dry country.'

Sterna (Hydroprogne) caspia caspia.

Sterna caspia Pallas, Nov. Comm. Acad. Sci. Imp. Petrop. xiv. pt. i. 1770, p. 582: Caspian Sea; Reichw. V. A. i. p. 56; Butler, Ibis, 1905, p. 382.

[B. coll.] 1 Port Sudan 8 Apl. R.S.; 2 Khartoum Feb. & Apl. 15.

[C. & L. coll.] 1 Port Sudan Dec. R.S.

The Caspian Tern is common in winter, Mr. Butler also observed one at Khartoum on July 8th. Should Lepechin's names be considered truly binomial, this species should be called *Sterna tschegrava* Lep. as this has priority over Pallas's name by several pages, and indeed was described a month earlier.

***Sterna* (*Thalasseus*) *bergii velox*.**

Sterna velox Cretzschmar in Rüppell's Atlas, ii. 1827, tab. 13, p. 21: Coasts of the Red Sea.

Sterna bergii apud Butler, Ibis, 1909, p. 403.

[B. coll.] 2 Port Sudan May, R.S.

Mr. Mathews has given a revised list of the races of this Tern ('Birds of Australia,' ii. pp. 346-347), and, as regards the Red Sea form, an examination of the material in the Museum bears out his suggestions.

There is as yet no definite record from within our limits of the Sandwich Tern, *Sterna* (*Thalasseus*) *sandvicensis sandvicensis*, but it occurs freely in the Red Sea and will doubtless be included at some future time.

***Sterna* (*Thalasseus*) *bengalensis arabica*.**

Thalasseus bengalensis arabicus Mathews, Birds of Australia, ii. 1912, p. 355.

Sterna media Horsf. et auct.; Reichw. V. A. i. p. 60; Butler, Ibis, 1909, p. 403.

Smaller and lighter than the typical race. Mr. Mathews shows that *S. media* of Horsfield is preoccupied as a name for the typical race, as is also *S. affinis* of Cretzschmar for this one.

Family PODICIPEDIDÆ.

***Podiceps ruficollis capensis*.**

Podiceps capensis Salvadori, Ann. Mus. Civ. Gen. (2) i. 1884, p. 252: South Africa.

Colymbus capensis Reichw. V. A. i. p. 18.

Mr. Butler states that the African Little Grebe occurs on both Niles, but is not numerous.

Family RALLIDÆ.

***Porzana porzana*.**

Rallus porzana Linn. Syst. Nat. 12th ed. i. 1766, p. 262: Europe, restricted type-locality France.

Ortygometra porzana Reichw. V. A. i. p. 283.

824 Messrs. Selater and Mackworth-Praed on [Ibis,
Porzana maruetta (Leach); Butler, Ibis, 1905, p. 385,
1908, p. 257.

[B. coll.] 2 Khartoum Apl. 12, Oct. 19.

Common on migration.

Porzana parva.

Rallus parvus Scopoli, Ann. i. Hist. Nat. 1769, p. 108 :
Carniola.

Ortygometra parva Reichw. V. A. i. p. 285.

[B. coll.] 3 Khartoum Oct. & Nov.

On migration, not common.

Crex crex.

Rallus crex Linn. Syst. Nat. 10th ed. 1758, p. 153 :
Europe, restricted type-locality Sweden.

Crex crex Reichw. V. A. i. p. 277.

Crex pratensis Bechst.; Butler, Ibis, 1905, p. 385.

[B. coll.] 2 Khartoum Sept. 18 & Oct.

The Land-Rail is common on migration.

Crexopsis egregia.

Crex egregia Peters, Monatsb. k. Akad. Berlin, 1854,
p. 134 : Mozambique; Reichw. V. A. i. p. 278.

This species just enters the southern boundary of the
Sudan, being recorded from Gondokoro (Heuglin).

Limnocorax niger.

Rallus niger Gmel. Syst. Nat. i. pt. 2, 1789, p. 717 : Cape
of Good Hope.

Limnocorax niger Reichw. V. A. i. p. 279; Butler, Ibis,
1905, p. 385.

[B. coll.] 3 Kaka, 1 Taufikia, 3 Malakal June, U.N.

[C. & L. coll.] 2 near Lake No Feb. Mch., 1 Tonga Feb.,
1 mouth of Bahr el Zeraf Mch., 1 White Nile lat.

12½° N. Jan., 1 lat. 9½° N. long. 31° 40' E. Mch. U.N.

[Chr. coll.] 1 Yambio Mch. B.G.

Common wherever there is water fringed with cover.

Gallinula chloropus chloropus.

Fulica chloropus Linn. Syst. Nat. 10th ed. 1758, p. 152 : Europe, restricted type-locality England.

Gallinula chloropus Butler, Ibis, 1905, p. 385, 1908, p. 257.

[B. coll.] 1 Khartoum, Oct. 20.

This bird, an immature male with a wing of 180 mm., we must consider to be a wanderer from the north, and not a local breeding bird. In fact, we do not know of any definite record of the African Moorhen (*G. c. brachyptera* Brehm) ever having occurred in the Sudan. We should expect, however, that it will be found in the south of the country. Mr. Butler mentions that most of the Moorhens he saw at Khartoum were in a more or less exhausted state. Claude Grant (Ibis, 1915, pp. 47-49) gives a revision of the races of the Moorhen.

Gallinula angulata.

Gallinula angulata Sund. Gefv. K. Vet.-Ak. Forh. Stockh. 1850, p. 110 : Interior of "Caffraria"; Reichw. V. A. i. p. 295.

Mr. Butler records a specimen as being captured alive at Singa Sen. by Capt. S. Flower. A second Sudanese example is included in the collection sent recently by Mr. King from Kajo Kaji L.E. collected on Jan. 25th, 1917.

Porphyrio alleni.

Porphyrio alleni Thomps. Ann. Mag. Nat. Hist. x. 1842, p. 204 : Niger ; Reichw. V. A. i. p. 292.

[B. coll.] 3 Malakal, 1 Taufikia June, U.N.

[C. & L. coll.] 1 Lake No Feb. U.N.

Confined to the southern half of the country.

Fulica atra atra.

Fulica atra Linn. Syst. Nat. 10th ed. 1758, p. 152 ; Europe, restricted type-locality Sweden ; Reichw. V. A. i. p. 297 ; Butler, Ibis, 1905, p. 385, 1908, p. 257.

[B. coll.] 1 Omdurman Nov. Kh.

A few stragglers as far south as Khartoum in winter.

Family TRERONIDÆ.

Vinago waalia.

Columba waalia Gmelin, Bruce's Reisen in das Innern von Afrika, 1791, p. 31: Tcherkin nr. Lake Tsana (*cf.* Claude Grant, Ibis, 1915, p. 36).

Vinago waalia Reichw. V. A. i. p. 392; Butler, Ibis, 1905, p. 358, 1908, p. 248 (*calva*, errore).

[B. coll.] 3 Roseires Aug. Sen.; 2 Rumbek Jan., 2 Mayik Jan. & Apl., 2 Madâl May, B.G.; 2 Mongalla "summer," Mon.; 1 Rejaf Feb. L.E.

Neumann (J. f. O. 1904, p. 341) has described *V. w. cinereiceps* from the Gelo River. We have no specimens from that exact locality, but we can find no constant distinction in birds from the Sobat River or any other locality.

Vinago calva uellensis.

Vinago calva uellensis Reichw. J. f. O. 1912, p. 320: Jakoma, Welle R.

[Chr. coll.] 2 Yambio Mch. B.G.

This we believe to be the first record of *V. calva* in the Sudan. There seems little doubt that these two specimens belong to the race described by Reichenow from the Welle. With regard to the races of *V. calva*, we should like to draw attention to the paper by Hartert and Goodson in the Nov. Zool. xxv. 1918, pp. 348-354. We find that the material in the Museum agrees completely with their conclusions. The question of the use of *Treron* or *Vinago* as a generic name is one into which we have not entered.

Family COLUMBIDÆ.

Columba livia near *schimperi*.

Columba schimperi Bonaparte, Consp. Avium, ii. p. 48: (Abyssinia!) probably Egypt.

[B. coll.] 3 Gebeit Mch. R.S.

[C. & L. coll.] 2 rocky kopje on Sinkat-Erkowit Plain Mch. R.S.

These Pigeons from the Red Sea Province (Gebeit is some 50 miles W.S.W. of Suakin) appear to be nearest to the Egyptian form *C. l. schimperi* Bp., but they do not agree with that race exactly. They appear to be larger on the whole than Egyptian birds and quite distinctly darker. Neither this race nor *C. l. schimperi* have any definite white patch on the lower back, but the light colour of the back, which is the same as that of the scapulars and wing-coverts, meets the dark colour of the rump in a definite straight line, whereas in *C. l. palestine* of Zedlitz, J. f. O. 1912, p. 339, there is on the lower back—in all our specimens at least—an intervening “buffer” patch of white. Again, on examining southern Arabian birds this same absence of any white is noticeable, but these again are darker still and in fact are approaching the dark *C. l. intermedia* of India. On the other hand, the only specimen in front of us from Muscat has, like western Persian birds (? *C. l. gaddi* Sarudny), a good deal of white. It appears, therefore, that we have an intergradation from the Egyptian bird, through the Red Sea Province birds, and the southern Arabian birds to *C. l. intermedia* of India, while the Palestine race and the Persian Gulf race may possibly be more closely connected with *C. l. livia* of Europe. Dr. Hartert, Nov. Zool. xxiii. p. 84, is of opinion that *C. l. palestine* is identical with Arabian birds, but in that case there either must be two birds in Palestine, a dark-backed and a light, the former of which we have not got here, or his southern Arabian birds must be different from ours.

Columba (Stictœnas) guinea guinea.

Columba guinea Linn. Syst. Nat. 12th ed. i. 1766, p. 282 : Guinea, ex Edwards.

[B. coll.] 1 Gedaref May, **Kas.** ; 1 Dug Dug May,
1 Gadein Jan. **B.G.**

[C. & L. coll.] 1 Sobat River Jan., 2 nr. Tonga Feb. **U.N.**

The races of this Pigeon have lately been reviewed by Claude Grant, Ibis, 1915, pp. 37–39, and Hartert & Goodson,

Nov. Zool. xxv. pp. 356-359. After examining the material in the Museum, we find we can recognise:—

1. *C. g. GUINEA*, *op. cit.* With a wing of from 216 (omitting "worn" specimens) to 236 mm. We can find nothing over this measurement, though a number are close to it.

Range. From Gambia to the Gold Coast and across through the Sudan and Ankole to the greater part of Abyssinia, Somaliland, and the whole of British East Africa to Kilimanjaro.

With this we unite unhesitatingly *C. g. longipennis* Reichw.

2. *C. g. DILLONI*.

Stictænas dilloni Bp. Comptes Rend. xxxix. 1854, p. 1105: "Abyssinia," probably Eritrea.

A most distinctly larger bird than *C. g. guinea*. Wing (according to Hartert & Goodson) 236-245 mm. Two specimens in the Museum measure 242, 245, one from Kokai 229! With these we should place a bird labelled "E. Africa" Verreaux, and which very possibly came from Eritrea, with a wing of 244 mm.

Range. Eritrea.

3. *C. g. UHEHENSIS* Reichw. O. M. 1898, p. 82: Iringa, of which we know nothing.
4. *C. g. PHÆNOTA* Gray: South Africa, which is plainly different.

Family TURTURIDÆ.

Streptopelia semitorquata semitorquata?

Columba semitorquata Rüpp. Neue Wirb. 1835, p. 66, pl. 23: Taranta Mountains, N. Abyssinia.

[B. coll.] 3 Roseires July, Sen.

[Chr. coll.] 1 Yei Dec. L.E.

In 'The Ibis,' 1915, pp. 41, 42, Claude Grant revised the races of this species, but we can in no way agree with the conclusions. Firstly, *Turtur shelleyi* of Salvadori, Cat. Birds

Brit. Mus. xxi. 1893, p. 419: Niger, cannot possibly be a race of this species, because we have an abundance of specimens of *S. semitorquata* from the same district. It is, of course, a race of *S. decipiens*, as pointed out by Zedlitz, J. f. O. 1910, p. 343.

Secondly, we do not think *S. s. minor* of Erlanger is a synonym of *S. s. semitorquata*, or, rather, we have no proof that it is, as we have not a single specimen from southern Somaliland. Those from the coast of British East Africa, which one would expect to be nearest to it, are certainly of very small size, wings 175 mm. and under. Thirdly, owing to paucity of material from the type-locality, we should not like to be certain whether the typical race is really separable from the West African form known as *S. s. erythrophrys* (Swains.). At present we must regard it as distinct, but there seem to us no tangible differences between the Lado bird and Roseires specimens, though, according to Zedlitz (J. f. O. 1914, p. 644), *S. s. intermedius* of Erlanger from S. Abyssinia is synonymous with *S. s. erythrophrys*, and the Lado bird should be of this form, while the Roseires birds should be nearer the typical race.

There are two Arabian specimens in the Museum which appear rather distinct, as their backs are lighter brown and their undersides considerably more bluish and less pinky. They may prove to be separable when more material is obtained.

Streptopelia decipiens decipiens.

Turtur decipiens Finsch & Hartlaub, Vög. Ostaf. 1870, p. 544: East Africa—more probably Dongola, cf. Zedlitz, J. f. O. 1914, p. 647, note; Butler, Ibis, 1905, p. 359.

[B. coll.] 4 Khartoum May.

[C. & L. coll.] 1 Singa, 1 Kamisa Dec. Sen.

[Gurney coll.] 1 Meroë Feb. Ber.

Common and often abundant in the northern half of the country.

S. decipiens is not unlike *S. semitorquata*, but is somewhat smaller, a good deal greyer on the underside, lighter on the

back, and the blue-grey wing-coverts contrast strongly with the blackish primaries and primary-coverts—in *S. semi-torquata* they are dark like the primaries and their coverts.

***Streptopelia decipiens* nr. *permista*.**

Turtur ambiguus permistus Reichw. V. A. iii. 1905, p. 808 :
“East Africa, from Victoria Nyanza to Zambesi.”

Turtur decipiens apud Butler, Ibis, 1908, p. 249, 1909, p. 88.

[B. coll.] 1 Bahr el Zeraf June, U.N. ; 1 Shambé May, 1 Giggling “summer,” Mon. ; 1 Wau Apl. B.G.

[C. & L. coll.] 1 Bahr el Zeraf Mch., 1 Meshra Zeraf Jan. (albino), 2 between Sobat R. and Bahr el Zeraf Feb. U.N.

These Doves agree best with Reichenow’s description of *S. d. permista*, but are slightly out of its supposed range. They are a good deal more richly coloured than the more northern *S. d. decipiens*, though there are intermediate examples. Close to them also, but possibly still more brightly coloured, is *S. d. shelleyi* Salvad. from the Niger. A good review of the races of this species is given by Zedlitz, J. f. O. 1914, pp. 645–649. We have not sufficient material to confirm or dispute his conclusions.

***Streptopelia vinacea barbaru*.**

Streptopelia barbaru Antin. Cat. di Ucc. 1884, p. 89 :
Sennar and Kordofan.

Turtur vinaceus apud Butler, Ibis, 1909, p. 88.

[B. coll.] 1 Khor Gitti Mch., 1 Wau Apl. B.G.

These two examples are probably intermediate between the typical race from north-western Africa and *S. v. barbaru* from “Sennar and Kordofan.” They have a wing measurement of 144 and 136 mm. A list of the races of this species is given by Zedlitz, J. f. O. 1910, p. 344. It is remarkable that we have no specimens whatever from what Antinori gives as typical localities. Salvadori states, in the Cat. Birds Brit. Mus. xxi. p. 429, that he has examined Antinori’s type and that it is this species, otherwise a mis-application of names would suggest itself.

Streptopelia vinacea erythreæ.

Turtur vinaceus erythreæ Neum. O. M. 1904, p. 82 :
Salomona near Massowa.

[C. & L. coll.] 1 Sinkat Meh. R.S.

This example with a wing of 150 mm. in all probability belongs to the above form, though we have no specimens with which to compare it.

Streptopelia roseogrisea roseogrisea.

Columba roseogrisea Sund. Krit. om Levaill. 1857, p. 54 :
Nubia.

Turtur roseigriseus Butler, Ibis, 1905, p. 359.

[B. coll.] 1 Khartoum May.

Streptopelia roseogrisea arabica.

Turtur roseogriseus arabicus Neum. O. M. xii. 1904, p. 31 :
Lahej, S. Arabia.

Turtur roseigriseus apud Butler, Ibis, 1908, p. 249.

[B. coll.] 1 Khor Arbat May, R.S.

The differences between these two races are well set out by Neumann, O. M. 1904, p. 83. The most noticeable difference between our two specimens is the greater amount of vinous flush on the throat and breast of the Red Sea coast bird and the narrower ring of black round its neck. This group, which is very closely allied to the *S. vinacea* group, is distinguished by the absence of a black loreal streak, whiter under wing-coverts, and paler coloration.

Streptopelia turtur turtur.

Columba turtur Linn. Syst. Nat. 10th ed. 1758, p. 164 :
England (India, *errore*).

Turtur turtur Reichw. V. A. i. p. 405.

Turtur communis Butler, Ibis, 1905, p. 359.

[C. & L. coll.] 1 Senga Dec. Sen.

This specimen and the only other Sudanese example we can find in the Museum collection appear to belong to the typical race. It seems probable, however, that the sandy-coloured form *S. t. arenicola* (Hartert, Nov. Zool. i. 1894,

p. 42: Fao, Persian Gulf) may also occur in the Sudan. Mr. Butler and also Reichenow record *S. t. isabellina* (*Turtur isabellinus* Bp. Comptes Rend. xliii. 1856, p. 942: Egypt) as occurring in the Sudan. We unfortunately have no specimens, but there seems to us a possibility that some of their records may refer to winter birds of *S. t. arenicola*. Reichenow records *S. lugens* (*Columba lugens* Rüpp. Neue Wirb. 1835, p. 64: Abyssinian Highlands) as occurring at Dongola, but this is an error, as Rüppell was referring to *S. turtur*.

Stigmatopelia senegalensis sudanensis, subsp. nov.

[B. coll.] 1 Khartoum May.

This race may be distinguished from all others from the mainland of Africa by its distinctly pale coloration; the breast below the collar is pale vinous pink of a more bluish, less reddish tinge than in its nearest ally *S. s. æquatorialis*; the female is paler than the male.

The few specimens we have are also of small size, wing 128–133 mm.

Type: a female collected by Hawker at Kaka, Upper Nile Province, 5 May, 1901. B.M. reg. no. 1902.4.20. 246.

Range. Wady Halfa to Lake No. We have no specimens from north of Khartoum, but as Dr. Hartert mentions pale birds from that region, Nov. Zool. xxiii. 1916, p. 83, it is probable that the range of this race extends to the northern boundary of the Sudan.

Stigmatopelia senegalensis æquatorialis.

Turtur senegalensis æquatorialis Erlanger, J. f. O. 1905, pp. 116–117, pl. 5: Menaballa, Abyssinia.

[B. coll.] 1 Sheik Tombé May, Mon.; 1 Tembura Mch. B.G.; 1 Rejaf Feb. L.E.

[C. & L. coll.] 1 Sinkat Mch. R.S.

The races of *S. senegalensis* have lately been worked out by Dr. Hartert, Nov. Zool. xxiii. pp. 82–83. On examination of the material in the Museum, however, we find that we must uphold Erlanger in his separation of the north-

west African form from birds from the rest of Africa. We must also separate the northern Sudan birds as above. The African races then appear to be :—

1. *S. s. SENEGALENSIS.*

Columba senegalensis Linn. Syst. Nat. 12th ed. i. 1766, p. 283 : Senegal ex Brisson.

Rufous both on back and underside with very little bluish tinge, the breast below the collar being strongly reddish pink. Wing 130–137 mm.

Range. Senegal probably to Northern Nigeria. The only example from the latter district we have appears to be nearest to the typical race.

2. *S. s. ÆQUATORIALIS, op. cit.*

A less reddish bird above and below ; this is most noticeable just below the collar where the breast is merely vinous pink, not reddish pink. Wing 132–144 mm.

Range. From St. Thomas Island through Southern Nigeria to the Bahr el Ghazal, Abyssinia, north to the Red Sea Province of the Sudan, Somaliland, and all Africa south of these countries. Also to S. Arabia and possibly Palestine.

3. *S. s. ÆGYPTIACA.*

Columba ægyptiaca Lath. Ind. Orn. ii. 1790, p. 607 : ex Forskål, Egypt.

A very rufous bird, redder even than *S. s. senegalensis* and larger, wing 133–151 mm. ; the rufous of the breast extends far down the chest, and that of the back on to the rump.

Range. Egypt only.

Plate v. of the J. f. O. 1905 gives a very fair idea of the distinctions of these three races.

4. *S. s. SUDANENSIS, op. cit.*

Differences as above.

Range. Wadi Halfa to Lake No.

5. *S. s. SOKOTRÆ* Claude Grant, Bull. B. O. C. xxxv. 1914, p. 19 : Socotra.

Although widely separated geographically from the last race, and with *S. s. æquatorialis* intervening, it happens to be practically identical with *S. s. sudanensis*.

6. *S. s. PHENICOPHILA* Hartert, Nov. Zool. xxiii. 1916, p. 82. No exact type-locality given, but from "Date groves south of the Atlas in Algeria, Tunisia, and Marocco."

Of this race we have no specimens, but it is given as browner and larger than *S. s. senegalensis*, wing 139–152 mm.

Turtur abyssinica delicatula.

Chalcopelia delicatula Sharpe, Bull. B. O. C. xii. 1902, p. 84 : Goz Abu Gumar, White Nile.

Chalcopelia afra (nec Linn.), Butler, Ibis, 1908, p. 249, 1909, p. 88.

[B. coll.] 4 Roseires Aug. & Sept. Sen. ; 1 Jebel Ahmed Agha May, 1 Malakal Dec. U.N. ; 1 Wau Apl. B.G.

[C. & L. coll.] 1 Kamisa Dec., 120 miles above Sennar Jan. Sen.

[Gurney coll.] 1 Meroë Feb. Sen.

This race may or may not be distinct from *C. abyssinica* Sharpe from northern Abyssinia. The latter was described at the same time as the above form and separated on the colour of the legs and feet. We can find no difference in colour of plumage, but as the colour of the bill is—as remarked below—a distinctly material character in these birds, we should not like to say that the colour of the legs and feet was of no importance.

The Blue-spotted Dove has for some time now been regarded as distinct from the Green-spotted Dove. Not only is this so, however, but there are two species of Blue-spotted Dove occurring side by side in the northern half of Africa. The material before us seems conclusive on the

point. The adults of the two species may be distinguished as follows :—

- A. A darker bird, with a brownish back to the head, not a pure blue-grey one, a browner back, a brown-tinged breast, and with the rest of the underside a dirty brownish white. Bill longer and stronger, red at the base, red, yellow, or orange for the apical portion; tip always yellow in dried skins.
- B. A lighter bird, with a clear blue-grey back to the head, a grey not brown back, a vinous or pinkish breast, and with the rest of the underside vinous white. Bill shorter and weaker, dusky, vinous black, or black throughout, in dried skins always black.

These birds occur together in Abyssinia, the Bahr el Ghazal, the Shari River country, and the Gold Coast Colony, from all of which countries we have specimens of *both* forms. Also as we have the dark form from Gambia, and Lord Rothschild has the light form from Senegal (*cf.* Bull. B. O. C. xxxviii. p. 37), we believe that both species occur in Senegal!

The question of names then arises.

Linnaeus's *Columba afra* was founded on Brisson's *Turtur senegalensis* (Briss. Orn. i. p. 122) from Senegal. Now which bird did Brisson have? After a careful examination of Brisson's description, we have come to the conclusion that it was the dark form, and this view is strengthened by the colour of the bill, which is given as red. Among the many collectors whose work is represented at the Museum, several have given the colour of the dark bird's bill as red, none have given the colour of the light bird's bill as anything but black or "vinous black." The name of the dark bird, therefore, we consider is *Turtur afra* (Linn.). The oldest name for the light bird is *T. abyssinica* (Sharpe).

There are probably several races of *Turtur afra*. The names available at present are *T. a. kilimensis* (Mearns) for the Kilimanjaro form, and *T. a. sclateri* Rothschild for a possible Uganda race. There is another race which we think should be named. This is the race of *T. afra* from

Abyssinia, with which Mearns compared his *T. a. kilimensis* (Proc. U.S. Nat. Mus. xlviii. 1915, p. 383) and which he believed to be identical with *T. abyssinica* (Sharpe). This may be characterised as follows :—

A race of *T. afra*, but, except for its long yellow-tipped bill, differing more from that form than it does from *T. abyssinica*: much paler than *T. a. afra* and with the belly and flanks almost white. From *T. abyssinica* it may be distinguished by its longer yellow-tipped bill, its slightly browner back, and by the breast being washed with brown and not purely vinous pink. From *T. a. kilimensis*, of which we have no specimens, it differs as pointed out by Mearns in his description of that race. This Abyssinian race we propose to name

TURTUR AFRA MEARNSI, subsp. nov.

Type: ♀. Roguecha, south of Adis Ababa, Abyssinia; collected by A. E. Pease, 14 Feb., 1901. B.M. reg. no. 1902. 1. 20. 295.

Turtur afra subsp. ?

[Chr. coll.] 1 Meridi Feb. B.G.

We have not sufficient material from this region or from the Welle river and Uganda to enable us to fix the sub-specific status of this bird. It appears to be extremely close to *T. a. afra*, if not identical with it, though its general colour is more earthy brown and less reddish brown than in most examples of the typical race. It is separable at a glance from *T. abyssinica delicatula*, which also occurs in the Bahr el Ghazal. Among the Uganda specimens before us, we might note that birds from south-east of Ruwenzori seem to be noticeably paler than those from the mountain itself, and we are of opinion that there is room for considerable investigation into the races of this bird.

Cena capensis.

Columba capensis Linn. Syst. Nat. 12th ed. i. 1766, p. 286: Cape of Good Hope (ex Brisson); Reichw. V. A. i. p. 429; Butler, Ibis, 1905, p. 359, 1908, p. 249, 1909, p. 401.

[B. coll.] 3 Khartoum Feb. & May.

[C. & L. coll.] 1 Kamisa Dec. Sen.

[Chr. coll.] 1 Meridi Feb. B.G.

[Gurney coll.] 1 Meroë Feb. Ber.

Widely distributed and often common. We can in no way distinguish the northern birds from the southern as was done by Oberholser, P. U.S. Nat. Mus. xxviii. 1905, p. 843.

Family PTEROCLIDIDÆ.

Pteroclorus senegallus.

Tetrao senegallus Linn. Mantissa, 1767-71, p. 526 : Senegal (ex Daubenton).

Pteroclorus senegallus Reichw. V. A. i. p. 315.

Pterocles senegalensis nec Licht., Butler, Ibis, 1905, p. 389.

[B. coll.] 3 near Khartoum Nov. & Apl., 1 Omdurman Jan. Kh.

[Gurney coll.] 1 Meroë Feb. Ber.

There appear to be more races than one of this species, but again we are held up by having no material from anywhere near the type-locality—if Senegal really was the type-locality.

The birds before us seem to group themselves into possibly three races: firstly, a paler race from Egypt; secondly, a rufous race from southern Tripoli, Fezzan through the Sudan to Somaliland; and, thirdly, the Indian birds, which are more like the Egyptian form, but with a noticeably blue flush on the hind-neck of the males. A possible name for the Sudanese form would be *P. s. guttatus* (*Pterocles guttatus* Licht. Verz. Doubl. 1823, p. 64, ex desertis Nubiæ). The examination of further material, however, has made us very doubtful whether any races can really be separated.

Pteroclorus senegalensis subsp. ?

Pteroclorus senegalensis Licht. Verz. Doubl. 1823, p. 64 : Senegambia.

Pterocles exustus Temminck et auctorum; Butler, Ibis, 1905, p. 389, 1909, p. 404.

[B. coll.] 4 near Khartoum Nov. & Dec., 2 near Omdurman Nov. & Apl. Kh.

[C. & L. coll.] 1 Sinkat-Erkowit Plain Apl. R.S. ;
1 Jebelcin Jan., 1 White Nile lat. 12° N. Jan. U.N.

The races of this bird, under the name *P. exustus* Temm., have been reviewed by several authors, the last of whom appears to be Claude Grant, in 'The Ibis,' 1915, pp. 31, 32. With some of his conclusions we cannot entirely identify ourselves. To start with, the type-locality is Senegambia, and we have no material whatever from that region. Claude Grant says that Egyptian specimens may be taken as typical, but—without proof—we must strongly dissent from this view. We think it far more likely from all analogy that three birds collected by Alexander at Lake Chad and widely distinct from examples from Egypt, will be found to be nearer the typical race than the Egyptian specimens.

The birds in the Museum collection group themselves as follows :—

1. A dark olivaceous-backed large race from Egypt. The name of this is *P. s. senegalensis* if Senegal birds cannot be distinguished from it, if they can be a new name will be required.
2. A paler race slightly smaller and with the back still tinged with olivaceous, but not nearly so strongly as in Egyptian examples. The race extends from Lake Chad through the Sudan to Abyssinia, though we may mention that two female specimens from Lake Chad are uncommonly pale. The name of this race is *P. s. senegalensis* if the Senegal birds—as we expect—are identical with it, *P. s. ellioti* (Bogd.) if they are not. Bogdanow described *Pterocles ellioti* from Abyssinia (Bull. Ac. Sci. Pétersb. xxvii. no. 2, 1881, p. 167).
3. A still paler race on the upper side but with a richer fulvous breast, much the same size as the last. This race ranges from Somaliland to as far south as the northern Guaso Nyiro in British East Africa, and its

name is *P. s. somalicus* Hartert (Nov. Zool. 1900, p. 28: Milmil, Somaliland).

4. A richer-coloured darker-backed race, more like the Egyptian race on the back but with a much more rufous tone, especially on the breast, and smaller. This race comes from the Kilimanjaro region and Masailand, and its name is *P. s. olivascens* Hartert (O. M. xvii. 1909, p. 183: Campi ya Simba, B.E.A.).

Outside Africa two other races have been described, *P. s. orientalis* Hartert from India and *P. s. erlangeri* Neum. from southern Arabia.

We cannot admit that Lichtenstein's *P. senegalensis* is invalidated by Linnaeus's previous *P. senegallus*, though from the point of view of clarity it is unfortunate that it is not.

Pterocles coronatus coronatus.

Pterocles coronatus Licht. Verz. Doubl. 1823, p. 65: Nubia.

There happen to be no specimens of this Sand-Grouse in the present collections, but it is not uncommon in the northern regions of the Sudan. The Museum possesses examples from Wady Halfa and the 2nd and 5th Cataracts. On examining the series from the whole range of this species, it was evident at a glance that there were two or three races. The Indian birds stand out as dark and well-marked, and southern Tunisian examples appear exactly the opposite. Inasmuch, however, as our birds are the typical race we will leave the naming of these to others.

Pterocles lichtensteini lichtensteini.

Pterocles lichtensteini Temm. Pl. Col. livr. 60, 1825, pls. 355, 361: Nubia; Butler, Ibis, 1909, p. 404.

[B. coll.] 1 Khor Arbat May, R.S.

[C. & L. coll.] 3 Sinkat Mch. R.S.

These birds are in all probability the typical form, though the term "Nubia" as used by Temminck is rather vague. The following races of this species have been separated, but

we have not sufficient material to confirm or dispute all of them :—

P. l. lichtensteini Temm. *op. cit.* : Nubia.

P. l. hyperythrus Erl. J. f. O. 1905, p. 94 : S. Somaliland.

P. l. arabicus Neum. O. M. 1909, p. 152 : S. Arabia.

P. l. sukensis Neum. O. M. 1909, p. 153 : E. Africa.

P. l. targius Schweppenburg, O. M. 1916, p. 56 : Tuareg country, Sahara.

P. l. abessinicus Schweppenburg, O. M. 1916, p. 57 : Abyssinia and N. Somaliland.

***Pterocles quadricinctus lowei*.**

Pterocles quadricinctus lowei Claude Grant, Bull. B. O. C. xxxv. 1914, p. 19: Renk, White Nile.

Pterocles quadricinctus apud Butler, Ibis, 1905, p. 390, 1908, p. 260, 1909, p. 90.

[B. coll.] 1 Setit river May, **Kas.** ; 1 Jebel Marba Apl. **Sen.** ; 1 El Obeid Apl. **Kor.** ; 1 Sobat river Mch. **U.N.** ; 1 Mongalla Jan. **Mon.** ; 1 Lado Feb. **L.E.** ; 1 Raffali Feb. **B.G.**

[C. & L. coll.] 1 Tonga Feb., 6 adults 1 juv. near Lake No Feb. **U.N.**

These specimens all agree with C. Grant's type of *P. q. lowei*, which seems a very well-defined eastern race.

Family **TURNICIDÆ.**

Turnix sylvatica lepurana.

Ortygis lepurana A. Smith, Rep. Exp. App. 1836, p. 55: near Kurrichane, W. Transvaal.

Turnix lepurana Reichw. V. A. i. p. 301; Butler, Ibis, 1908, p. 258.

[C. & L. coll.] 2 Bahr el Zeraf Feb. **U.N.**

We cannot in any way separate these two specimens from the South African form, though *T. s. alleni* Mearns from East Africa (Smithsonian Misc. Coll. lvi. no. 20, p. 5) seems a well-marked intervening race. Mr. Butler notes this species as seen but not obtained near Wau, **B.G.**

Family NUMIDIDÆ.

Numida ptilorhyncha ptilorhyncha.

Numida ptilorhyncha Lesson, 'Traité d'Orn. 1831, p. 498 : Mareb river, N. Abyssinia (cf. Claude Grant, Ibis, 1915, p. 26) ; Butler, Ibis, 1905, p. 388, 1908, p. 260.

[B. coll.] 3 Jebel Ahmed Agha Jan. U.N.

[C. & L. coll.] 2 Kamisa Dec. Sen.

Claude Grant has reviewed these birds in 'The Ibis,' 1915, pp. 24-30, and, until we have a great deal more material than is at present available, we are content to abide by his conclusions. The specimens above we believe to belong to the typical race, but Claude Grant is of opinion that those collected by Hawker at Kaka U.N. are *N. p. major* Hartl. It is probable, therefore, that *N. p. ptilorhyncha* is the race inhabiting the northern half of the country, and that *N. p. major* enters it from the south, and there is no exact demarcation possible between the two.

Family PHASIANIDÆ.

Coturnix coturnix coturnix.

Tetrao coturnix Linn. Syst. Nat. 10th ed. 1758, p. 161 : Europe, Asia, Africa ; restricted type-locality Sweden.

Coturnix communis (Bonn.) ; Butler, Ibis, 1905, p. 387.

[B. coll.] 1 Erkowit, 1 Kamobsana Mch. R.S. ; 1 Shendi May, Ber. ; 5 Khartoum Nov. Dec. Apl.

[C. & L. coll.] 2 near Kamisa Dec. Sen.

Dr. Hartert has reviewed the forms of the Common Quail in Nov. Zool. xxiv. 1917, pp. 420-425. Our specimens appear to be undoubtedly of the typical race.

Coturnix delegorguei.

Coturnix delegorguei Deleg. Voy. Afr. Austr. ii. 1847, p. 615 : Upper Limpopo river ; Reichw. V. A. i. p. 507 ; Butler, Ibis, 1908, p. 258.

[B. coll.] 2 Malakal June, U.N. ; 2 Amien Apl. B.G.

We cannot separate these Quails from South African examples. On examining a series of these birds, however,

we are inclined to suggest that the birds from the Island of St. Thomas are a somewhat darker resident race, while those from southern Arabia are very noticeably paler and more sandy in coloration.

Ptilopachus petrosus brehmi.

Ptilopachus fuscus brehmi Neum. Bull. B. O. C. xxi. 1908, p. 68: Jebel Melpes, *i. e.* probably Jebel Melbis, Kordofan.

Ptilopachus fuscus apud Butler, Ibis, 1905, p. 388.

[B. coll.] 9 Jebel Melbis Apl., 1 El Ein Mch. Kor.

This race of *P. petrosus* was described as above by Neumann. Its range is not apparently the whole of Kordofan, but only the northern portion. From the material now available it is obvious at a glance that the four races of this species already described are not sufficient. Two others are easily recognisable in the Sudan. The first of these is a bird rather nearer typical *P. p. petrosus* than *P. p. brehmi*, but distinctly more rufous. The feathers of the crown are redder also, and with little of the grey edging found in *P. p. fuscus*. A good deal darker bird than *P. p. brehmi*. We name this

PTILOPACHUS PETROSUS BUTLERI, subsp. nov.,

and its range is apparently southern Kordofan and the Bahr el Ghaza! Province, except the eastern edge to the Gribingui, where it was met with by Alexander. Type: ♂, collected by A. L. Butler at Buval, near Wau, Bahr el Ghazal, 29. 1. 1907. B.M. reg. no. 1916. 9. 20. 670.

Of this we have:—

[B. coll.] 1 Raffali Feb., 1 Kojali Feb., 1 nr. Wau Jan., 1 Pongo river Mch. B.G.; and 2 from Khor Nabag, Kordofan, presented by W. B. Hallhead, 1 from the Bahr el Ghazal by G. Blaine, and 1 from the Gribingui river, Lake Chad territory, by Alexander.

According to Mr. Butler (Ibis, 1908, p. 259) it is a common bird in the ironstone country.

The second race we have to name is one from the Lado Enclave, the extreme easterly portion of the Bahr el Ghazal

bordering it, and probably the Nile Province of Uganda. This is a much darker bird than the last and is very close to *P. p. florentiae* Grant from British East Africa, but it is distinguished by a more rufous tinge on the back, not grey-brown as in that race. This we name

PTILOPACHUS PETROSUS LADOENSIS, subsp. nov.

Type from Mvolo, close to the boundary between the Bahr el Ghazal and Lado Enclave, June 1905, presented by Major H. Bray, B.M. reg. no. 1909.8.7. 120.

Hartert has shown (Nov. Zool. xxiv. p. 276) that the name *Tetrao petrosus* of Gmelin refers to this species and not to the Barbary Partridge. The races of *P. p. petrosus* then are:—

1. *P. p. PETROSUS.*

Tetrao petrosus Gmel. Syst. Nat. i. pt. 2, 1789, p. 758 :
Gambia (ex Buffon, ex Stibbs).

Range. Senegal to Northern Nigeria and the Shari region.

2. *P. p. BREHMI* Neum. *op. cit.*

Range. Northern Kordofan.

3. *P. p. MAJOR* Neum. *ibid.*

Range. Northern Abyssinia.

4. *P. p. BUTLERI.*

Range. Bahr el Ghazal westwards to Gribingui River.

5. *P. p. LADOENSIS.*

Range. Lado Enclave and surrounding districts.

6. *P. p. FLORENTIÆ.*

O.-Grant, Bull. B. O. C. x. 1900, p. cvii : Gessema,
B.E.A.

Range. British East Africa.

Francolinus erckeli pentoni.

Francolinus erckeli pentoni M.-Praed, Bull. B. O. C. xl.
1920, p. 141 : Erkowit.

Francolinus erckeli apud Butler, Ibis, 1908, p. 259.

[B. coll.] 7 Erkowit Mch. R.S.

[C. & L. coll.] 6 Erkowit Apl. R.S.

A remarkably distinct race of *F. erckeli* Rüpp., differing chiefly by its paler and greyer colour. It seems to be confined to the district round Erkowit. An intermediate race between it and *F. erckeli* occurs in Eritrea.

Francolinus icterorhynchus icterorhynchus.

Francolinus icterorhynchus Heuglin, J. f. O. 1863, p. 275 : Bongo, B.G. ; Butler, Ibis, 1908, p. 259, 1909, p. 89.

[B. coll.] 1 Pongo river, 1 Chak Chak Feb., 1 Tembura Meh., 3 Wau Apl. B.G.

Francolinus icterorhynchus emini.

Francolinus icterorhynchus emini Neum. Orn. Monatsber. 1907, p. 198 : west of Lake Albert.

[B. coll.] 1 Kajo Kaji Meh. L.E.

This is a considerably darker form than the typical race, and the heavily marked throat and breast are somewhat reminiscent of the *F. clappertoni* group. We can find no constant difference in size between the two races. The range of *F. i. icterorhynchus* extends apparently from the southern Bahr el Ghazal to the Shari river, while *F. i. emini* inhabits Uganda and the southern Lado Enclave.

Francolinus clappertoni clappertoni.

Francolinus clappertoni Children, Denham & Clapperton's Trav., App. xxi. 1826, p. 198 : Bornu ; Butler, Ibis, 1905, p. 387.

[B. coll.] 3 Jebil Melbis Apl. Kor.

[C. & L. coll.] 1 65 miles N.W. of El Obeid Jan. Kor. (Hon. G. Legge coll.).

Francolinus clappertoni clappertoni > *heuglini* (intermediate).

[C. & L. coll.] 2 White Nile lat. $13\frac{1}{2}^{\circ}$ N. Jan. W.N. ; 1 Jebelein Jan., 1 30 miles N. of Renk Feb. U.N.

Francolinus clappertoni heuglini.

Francolinus clappertoni heuglini Neum. O. M. 1907, p. 199 : Meshra el Rek, B.G.

[B. coll.] 1 Malakal May, 1 nr. Lake No May, 1 Khor Attar Feb. U.N.

[C. & L. coll.] 3 nr. Lake No Feb. & Meh., 3 Tonga Feb., 2 Khor Filus Feb., 2 mouth of Zeraf river Feb., 1 mouth of Sobat river Feb., 1 lat. $9\frac{1}{2}^{\circ}$ N. long. $30^{\circ} 40'$ E. Feb. U.N.

Francolinus clappertoni heuglini < *gedgei* (intermediate).

Francolinus gedgii apud Butler, Ibis, 1908, p. 258.

[B. coll.] 2 Mongalla "summer," Mon.; 1 Ayûm Jan., 1 Gadein Apl. B.G.

The fine series of these Francolins before us show very fairly definitely the limits of each race, and they show also how very much more the Game-birds are likely to vary within a given area than most other groups of birds. The range of *F. clappertoni* in its various forms is as follows:—

1. *F. c. CLAPPERTONI* Children, *op. cit.*

The palest form with a sandy-brown tone on the back, ground-colour of underside generally white.

Range. Lake Chad to Kordofan.

On the White Nile from about El Duem to Renk a form close to this race but tending towards the next is found. We have referred to it as *P. c. clappertoni* > *heuglini*.

2. *F. c. HEUGLINI* Neum. *op. cit.*

A much darker race with a dark grey not brown tone on the back, ground-colour of underside yellowish white, dark markings wider and heavier.

Range. From somewhere between Renk and Fashoda to the Sudd district of the eastern Bahr el Ghazal and the Upper Nile Province.

Further south in Mongalla and the southern Bahr el Ghazal another form occurs, which is near *P. c. heuglini*, but browner on the back and in reality intermediate between this race, *F. c. clappertoni*, and *F. c. gedgei*. It is possibly nearest the latter. We have referred to it as *F. c. heuglini* < *gedgei*.

3. *F. c. GEDGEI.*

Francolinus gedgii O.-Grant, Ibis, 1891, p. 124: Plains near Mt. Elgon.

The darkest race, though very little more so than *F. c. heuglini*, but with a browner, less grey tone on the back than that form.

Range. Mt. Elgon and Uganda.

Francolinus sharpei.

Francolinus sharpii O.-Grant, Ibis, 1892, p. 47: Bogosland.

[B. coll.] 1 Disa Apl., 4 Roseires July & Aug. **Sen.**

These birds do not agree exactly with typical *F. sharpei* from northern Abyssinia. The feathers of the breast are darker and the ground-colour of the underside whiter, giving a more black and white appearance to the bird. On the whole, they are darker and better marked on the back also. *Francolinus sharpei* is very closely allied to *F. clappertoni* and its allies, but as it has more distinctive features than the other races of that species we prefer to keep it specifically separate at present.

F. königseggi Madarasz (Ann. Mus. Nat. Hung. xiii. 1915, p. 560: Dinder river), founded on a single female, is identical with or closely allied to this species.

Francolinus sephæna granti.

Francolinus granti Hartlaub, P. Z. S. 1865, p. 665: Unjamwezi, East Africa.

[B. coll.] 1 Mongalla Jan. **Mon.**; 2 Lado, 2 nr. Rejaf, Feb. **L.E.**

There seems to be no clearly marked distinction between these specimens and birds from East Africa and Uganda. Should they eventually prove separable, a name is to hand for them in *Francolinus ochrogaster* Hartlaub, J. f. O. 1882, p. 327, from the Upper Nile.

Francolinus coqui schlegeli.

Francolinus schlegeli Heugl. J. f. O. 1863, p. 275: Bongo river, Bahr el Ghazal.

We have no specimens of this bird nor do we believe that any collector has met with it since the time of Heuglin. We have before us a coloured drawing of the type in the Stuttgart Museum and it seems to differ little from *F. coqui*, except that the barring of the underside is finer and the shoulders and wing-coverts are uniform light red.

***Francolinus schuetti schuetti* ?**

Francolinus schuetti Cabanis, J. f. O. 1881, p. 351 : Lunda, Angola-Belgian Congo boundary.

[Chr. coll.] 1 Meridi Jan. **B.G.**

The races of this species have been reviewed by Claude Grant, Ibis, 1915, pp. 18-19, and we agree with his conclusions. Whether *F. s. zappeyi* Mearns can stand for the Uganda birds, with which our specimen is identical, we do not know, as we have no examples from Lunda, the type-locality of the original bird. We should have little hesitation, however, in refusing to admit two other races named by Mearns, viz., *F. s. keniensis* and *F. s. kapitensis*, and we have doubts whether the material at his disposal was sufficient to warrant such close subdivision.

We are by no means certain that *F. schuetti* is any more than a race of *F. squamatus* Cassin of Gaboon, and that this is also the case with *F. ahantensis* Temm. The group thus made is a well-defined one and ranges throughout tropical Africa.

***Ammoperdix heyi cholmleyi*.**

Ammoperdix cholmleyi O.-Grant, Handbook Game-Birds, ii. 1897, p. 293 : Erba Hills, nr. Suakin.

[B. coll.] 11 neighbourhood of Suakin Meh. Apr. May, **R.S.**; 6 Bir Shigrieb, 1 Bir Terfaur Nov. **Ber.**

[C. & L. coll.] 5 Sinkat Meh. **R.S.**

The above specimens constitute a fine series of these little Partridges. There is also a specimen from Assuan in the Museum collection obtained by Mr. F. S. Worthington, which appears to belong to this subspecies and therefore extends its range northwards into Egypt.

Family STRUTHIONIDÆ.

Struthio camelus camelus.

Struthio camelus Linn. Syst. Nat. 10th ed. 1758, p. 155 : Habitat in Syria, Arabia, Lybia, Africa, restricted type-locality North Africa (*vide* Rothschild, Bull. B. O. C. xxxix. p. 83); Butler, Ibis, 1905, p. 401, 1908, p. 263.

[C. & L. coll.] 1 Meshra Zeraf Jan. U.N.

According to Mr. Butler, the distribution of the Ostrich is wide in the Sudan. He notes it from the Setit, Dinder, White and Blue Niles, Bahr el Ghazal, and Kordofan.

There is an interesting note in the 'Catalogue of Birds,' vol. xxvii. p. 576, on the reported existence of a diminutive didactyle Ostrich "not higher than *Otis arabs*." It was reported by Mr. Petherick from Kordofan and by Heuglin, though not from personal observation, from near Fazogli. Curiously enough, an identical report reached us fairly recently from the neighbourhood of Lake Rudolf. We know of no other bird unknown to science which already has a vernacular and a scientific name! In 1847, G. R. Gray bestowed the name "*Charadrius bidactylus*" on L'Autruchon of Temminek.

ADDENDA and CORRIGENDA.

Ibis, 1918, p. 425. *Corvus umbrinus* should be *Corvus ruficollis* (Lesson, Traité d'Orn. 1830, p. 329: probably Cape Verde Is.), or *Corvus corax ruficollis* if it is regarded as a race of the Raven.

Ibis, 1918, p. 425. *Rhinocorax affinis* should be *Rhinocorax rhapidurus*: cf. Hartert, Bull. B. O. C. xxxix. p. 21.

Ibis, 1918, p. 437. *Ploceus vitellinus*. Two more specimens have now been sent by Mr. King from the Lado Enclave, and, though we stated that we could not distinguish Sudanese birds from West African specimens, we are not sure that further material may not enable us to do so, though the newly arrived examples do not agree with Neumann's *P. v. uluensis*. They appear to

be distinctly richer in colour, the crown of the males being a richer golden-brown than in any other specimens in the Museum. It may approach *Ploceus reichardi* Reichw., but we have no specimens with which to compare them.

Ibis, 1918, p. 445. *Estrilda cinerea*. *Fringilla cinerea* Vieillot, 1817, is preoccupied by *F. cinerea* Gmelin, Syst. Nat. i. pt. 2, p. 922, 1789. The next name available appears to be *Estrilda troglodytes* (*Fringilla troglodytes* Licht. Verz. Doubl. 1823, p. 26: Senegambia).

Ibis, 1918, p. 447. *Lagonosticta rufopicta*. These birds should probably be known as *Lagonosticta rufopicta incerta* (*Lagonosticta incerta* Mearns, Smithsonian Misc. Coll. lvi. 1909, No. 14, p. 6: Gondokoro). Mr. Selater has recently examined the types at Washington, and from his description they are identical with the birds in the Butler collection. They differ from typical *L. rufopicta* from the Gold Coast by their greyer, less brown, backs and upper surfaces.

Ibis, 1918, p. 450. *Pytelia melba soudanensis*. With this subspecies we would provisionally identify *Pytelia slatini* Madarasz, Ann. Mus. Nat. Hung. Budapest, xiii. 1915, p. 601. We have only recently seen this memoir.

Ibis, 1918, p. 454. After *Spermestes cucullatus* insert *Amaurasthes fringilloides*. A specimen of this bird was sent by Mr. King from Kajo Kaji in the Lado Enclave; it was collected 16 Mch. 1917, and constitutes the first record of this species from the Sudan.

Ibis, 1918, p. 456. *Quelea erythrops*. An adult female of this species was collected at Kajo Kaji in Jan. 1917. This is the first recorded occurrence since Heuglin's specimen mentioned on p. 456.

Ibis, 1918, pp. 456-7. *Pyromelana flammiceps craspedopterus*. According to Lönnerberg (Ark. Zool. Stockh. 1918, xii. No. 3), *Loxia hordacea* of Linnæus, 1758, is founded on a specimen of what is known as *Pyromelana flammiceps*. Assuming that Linnæus's specimen came from West Africa, our birds should be known as *Pyromelana hordacea craspedopterus*.

- Ibis, 1918, p. 470. *Passer jagoensis cordofanicus*. Lord Rothschild has kindly sent us two examples of the true *P. j. cordofanicus* collected by Baron von Müller's expedition in 1848 in Kordofan, and they differ most strikingly from the Mongalla birds to which we had applied that name. The only characters we need note are that the upper surface is bright rufous chestnut instead of brown or grey-brown, and the dark streaks on the mantle are fewer in number. Our birds must then be called *Passer jagoensis shelleyi* (*Passer shelleyi* Sharpe, Ibis, 1891, p. 256: Lado), though it is worth remarking that the type is a very bright-coloured bird compared with ours.
- Ibis, 1918, p. 470. After *Passer domesticus arboreus* should be inserted *Passer hispaniolensis*, which reaches as far south as the Dongola Province in the Nile Valley, and has even been recorded from the Blue Nile.
- Ibis, 1918, p. 611. *Motacilla vidua* Sundev. is antedated by *Motacilla aguimp* Dumont, Dict. Sci. Nat. xxi. 1821, p. 226, ex Levaillant: "Orange River." Cf. Austral Avian Record, iii. No. 1, p. 14.
- Ibis, 1918, p. 612. *Motacilla flava melanocephala* should be *Motacilla flava feldegg* Michahelles, Isis, 1830, p. 812: Dalmatia, as Lichtenstein's name is preoccupied by *Motacilla melanocephala* of Gmelin, 1789. The Yellow Wagtails would be treated of better under the separate generic or subgeneric title *Budytes*.
- Ibis, 1918, p. 656. *Cisticola erythrops roseires*. This form is probably identical with *Cisticola nilotica* Madarasz, Ann. Mus. Nat. Hung. xii. 1914, p. 591: Blue Nile, lat. 13° N. If so, the bird must be known as *C. erythrops nilotica* Madarasz.
- Ibis, 1918, p. 676. *Prinia mistacea mistacea*. *Prinia pallescens* Madarasz, Ann. Mus. Nat. Hung. xii. 1914, p. 593: Luieza, Dinder river, is probably only a worn example of *P. m. mistacea*.
- Ibis, 1918, pp. 669-670. *Troglodytes micrurus* Rüppell, Neue Wirb. p. 109, pl. 41, was published in 1836, thus antedating *Sylvietta brachyura* of Lafresnaye, 1839, and therefore the name for the group should be *Sylvietta micrura*, not *brachyura*.

Ibis, 1918, p. 682. The name *Cossypha* is preoccupied, *vide* Austral Avian Record, vol. iii. No. 2, p. 43, and the genus should be known as *Bessonornis*.

Ibis, 1918, p. 684. *Thammodaea coronata kordofanensis*. Major Claude Graham has lately sent home a pair of these fine Chats from near Talodi in the Nuba mountains, and states that they are not uncommon. These are the first examples to reach this country, though it was described by Wettstein in 1916. As we have seen no typical *T. coronata*, we can offer no opinion as to its subspecific distinctness.

Ibis, 1918, p. 685. Add *Saxicola hemprichi*.
Saxicola hemprichi Ehrenberg, Symb. Phys. 1828, fol. AA: Kurfuda, Arabia.

Pratincola maurus apud Reichw. V. A. iii. p. 734.

If this form is really a distinct race breeding in north-west Africa, it must be added to our list, as it is recorded by Madarasz (Ann. Mus. Nat. Hung. xii. 1914, p. 589) from Beida, Dinder river.

Ibis, 1918, p. 690. Add *Ananthe leucomela cypriaca*.
Saxicola cypriaca E. v. Homeyer, Zeitschr. f. Ges. Orn. i. 1884, p. 397: Cyprus.

This Cypriote so-called resident race also occurs in the Sudan and Egypt, as has been pointed out to us by Mr. Bonhote; the subspecies is distinguished by its rather deeper colour and shorter wing, measuring 84–89 mm. against 94–96 for the typical race.

One of the Khartoum birds mentioned in our list (Ibis, 1918, p. 690) should be referred to *Æ. l. leucomela*, the others all to *Æ. l. cypriaca*.

Ibis, 1918, p. 694. The genus known as *Crateropus* should bear the name *Turdoides*, *vide* Richmond, P. U. S. Nat. Mus. liii. p. 627, note.

Ibis, 1918, p. 700. The genus *Coracina* Vieillot is invalidated by *Coracinus* Pallas, *cf.* Austral Avian Record, iii. No. 3, p. 66, and the species *pectoralis* should be placed in the genus *Graucalus* of Cuvier if it is considered congeneric with *G. papuensis* the type of that genus, and in *Ceblepyris* Cuvier if it is not.

Ibis, 1918, p. 643. *Acrocephalus scirpaceus scirpaceus*. Mr. Witherby has sent us two Reed-Warblers collected by himself at Kawa and Shebesha which he refers to *A. s. macronyx*, the eastern race of *A. scirpaceus*. We agree with his identification, and consider also that the majority of the Butler specimens are probably of this race. It does not seem possible, however, to say exactly to which race any one specimen belongs, but the series are, in colour, paler than the average European birds.

After *A. s. scirpaceus*, therefore, should be inserted *A. s. macronyx* (*Salicaria macronyx* Severtzoff, Turkestan Jevotn. in Izv. Obsheh. Moskov. viii. 1873, (2) p. 128: Sir Darya), and, inasmuch as the Shebesha specimen is the one mentioned on p. 644 under *Acrocephalus palustris*, that species must be deleted from the list.

Ibis, 1918, p. 659. *Hippolais pallida*. Mr. Witherby has very kindly sent us an example of *Hippolais rama* collected by himself on the Nile at Kawa. On further examination we are also inclined to attribute at least four of the Butler birds from Khartoum, and the Chapman and Lynes specimen from Singa, to this species and not to *H. pallida*. This is, of course, a new bird to the Sudanese and probably to the African list. Several birds collected by Alexander at Lake Chad seem also to be nearer *H. rama*, and it will probably be found to have a fairly extensive distribution in Africa. *H. pallida* and *H. rama* are by no means easy to tell apart, and the Sudanese birds in particular do not seem to differ so much as Asiatic specimens.

After *Hippolais pallida*, therefore, should be inserted *Hippolais rama* (*Sylvia rama* Sykes, P. Z. S. 1832, p. 89: Deccan).

Ibis, 1918, p. 664. *Phylloscopus trochilus trochilus*. Mr. Witherby has sent us three Willow-Wrens from the White Nile which are undoubtedly of the typical form, though Mr. Butler's Khartoum series appear to be mainly *P. t. eversmanni*.

Ibis, 1918, p. 704. *Muscicapa striata*. An example of the eastern race of the Common Flycatcher, *M. s. neumanni* has been sent by Mr. King from Kajo Kaji in the Lado Enclave. Another bird from the same place appears to be of the western form.

Ibis, 1918, p. 704. *Muscicapa collaris* should be *Muscicapa albicollis*, as *M. collaris* Bechstein is preoccupied, *vide* Additions and Corrections to B. O. U. List, Ibis, 1918, p. 239. It seems likely that *M. collaris* and *M. atricapilla* should be separated from *Muscicapa* under the name *Ficedula* Brisson.

Ibis, 1919, p. 631. Under *Yungipicus obsoletus obsoletus*, *Y. o. ringens* is a misprint for *Y. o. ingens*.

Ibis, 1919, pp. 644-5. The names of the emerald-golden group of Cuckoos have been in considerable confusion, both in Latin and in English. They should be as follows:—

<i>Cuckoo with yellow underparts.</i>		<i>Cuckoo with white underparts.</i>
English.	Emerald.	Golden. Copper. Didric.
Latin.	<i>Cuculus cupreus</i> Shaw, Mus. Lever. 1792, p. 157. <i>C. smaragdineus</i> Swains. B. of W. Afr. ii. 1837, p. 191. <i>C. intermedius</i> Hartl. B. of West Africa, 1857, p. 191.	<i>Cuculus caprius</i> Boddarta, Tabl. Pl. Enl. 1783, p. 40. <i>C. auratus</i> Gmelin, Syst. Nat. i. pt. 1, 1788, p. 421.

On page 644, therefore, for *C. caprius* Bodd. read *C. cupreus* Shaw, and on page 645 for *C. auratus* Gmel. read *C. caprius* Bodd. It would be best also to call the former the Emerald and the latter the Didric Cuckoo. If it is preferred to regard *C. caprius* Bodd. as a misprint for *C. cupreus*, then Shaw's name is invalid and disappears, and the Emerald Cuckoo becomes *C. smaragdineus* Swains. For the races of the Emerald Cuckoo, see Bannerman, Ibis, 1912, pp. 244-7.

Ibis, 1919, p. 648. *Chizærhis zonurus*. *Crinifer* Jarocki, 1821, replaces *Chizærhis* Wagler, 1827, *vide* Austral Avian Record, iii. No. 6, p. 146.

After *Chizchis zonurus* should be inserted *Corythaixoides leucogaster*, of which a specimen has been sent home by Mr. King. It was collected at Ikoto near Torit in south-east Mongalla, 17 Feb. 1918, and is an addition to the Sudanese list.

Ibis, 1919, p. 663. *Irrisor erythrorhynchus*. The genus *Irrisor* must be replaced by *Phœniculus* Jarocki, 1821 (*cf.* Austral Avian Record, iii. No. 6, p. 146), and the family Irrisoridæ must become Phœniculidæ.

Ibis, 1919, p. 668. Among the Alcedinidæ should be inserted a race of *Alcedo ispida*. Mr. Butler informs us that it occurs commonly in the harbour at Port Sudan, and that a specimen obtained by him was given to the Gordon College Museum. Mr. Butler refers the specimen to *A. i. pallida* Brehm.

Ibis, 1919, p. 675. *Palæornis krameri*. *Palæornis* should be *Psittacula*, *vide* Mathews, Birds of Australia, vi. p. 169.

Ibis, 1919, pp. 686-7. For *Tinnunculus* read *Cerchneis*. *Vide* A. O. U. Check-list of North American Birds, pp. 165-166.

Ibis, 1919, p. 697. For *Aquila rapax albicans* read *Aquila rapax raptor*. The name *Falco* (*Aquila*) *albicans* Rüpp. is preoccupied by *Falco albicans* Gmelin, S. N. i. p. 276, as was pointed out to me by Mr. Iredale. The next available name appears to be *Aquila raptor* A. E. Brehm, Naumannia, 1855, p. 13: Blue and White Niles, of which the type is at Tring.

With regard to the Eagles collected by the Chapman-Lynes expedition in the Red Sea Province, Mr. Abel Chapman has suggested that at least one of the Eagles we have called *A. r. albicans* differs considerably from the others, notably by the length of its legs as compared with the shortness of its tail. It was collected at Erkowit and certainly is unlike most of the *A. r. albicans* in the Museum, being a more compact-looking bird. In this connection we would note that all the dark specimens of *A. rapax* come from the north-eastern corner of Africa, and also that in India there is a race of *A. rapax*, *A. r. vindhiana*, which has a

very dark stage of plumage, and is not unlikely to wander to Africa. *A. r. albicans* or rather *raptor* and *A. r. vindhiana* appear to be indistinguishable, except in the fully adult when they are very distinct.

Also on p. 697 under *Aquila rapax albicans* [C. & L. coll.], for 1 Erkowit read 4.

Ibis, 1919, p. 699. *Buteo buteo rufiventer*. According to Richmond, Auk, 1919, p. 549, the earliest name for this species is *Falco rufocanus*, Forster's edition of Levaillant's Oiseaux d'Afrique, 1798, pl. 17. The finding of this little-known work involves also changes in the names of the Jackal-Buzzard and Kolbe's Vulture. In the case of the Desert Buzzard, however, Forster's name is founded, like Daudin's *Falco desertorum*, on Levaillant's plate, and if this is not identifiable as stated by Hartert, the name *Falco rufocanus* is in the same category as *Falco desertorum*, and neither can be used.

To the list of Literature on Sudan Ornithology at the beginning of the first part of the paper should be added the following:—

27. PETHERICK, J., with notes by H. E. Strickland. List of Birds procured in Kordofan. Proc. Zool. Soc. 1850.
28. SASSI, Dr. Ein Beitrag zur Kenntnis der Vogelwelt vom Weissen Nil. Ann. Nat. Hist. Hof-Mus. Wien, xxi. 1906, pp. 45-59.
29. MADARASZ, J. von. A Contribution to the Ornithology of the Eastern Sudan. Ann. Mus. Nat. Hung. Budapest, xii. 1914, pp. 558-604; 1 pl.
30. WETTSTEIN, O. von. Wissenschaftliche Ergebnisse der von F. Werner unternommenen Zool. Exped. nach dem Anglo-Aegyptische Sudan (Kordofan), 1914; ii. Bearbeitung der Vögel und Säugethiere. Denkschr. k. Akad. Wiss. Wien, xciv. 1917, pp. 553-693.